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AMERICAN INSTITUTE OF CROP ECOLOGY

Silver Spring, Maryland

SUGARBEET-CLIMATE RELATIONSHIPS

AND THE USE OF PHENOLOGY IN ASCERTAINING THE TEMPERATURE REQUIREMENTS OF SUGARBEET
WITH SPECIAL REFERENCE TO THE INTERMOUNTAIN REGION
OF THE UNITED STATES

Based on Data of Utah, Idaho, and Washington

CONTRACT NO. DA 18-064-AMC-127(A)

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TABLE A
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STATION	COUNTRY (State of U.S.)	REGION OF COUNTRY	PROVINCE	LATITUDE	T E M P E R A T U R E												ANNUAL RELATIVE HUMIDITY		PRECIPITATION		
					ANNUAL			WARMEST MONTH			COOLEST MONTH										
					Mean	Day	Night	Mean	Day	Night	Mean	Day	Night	Mean	Day	Night	Mean	Daily	Annual	Maximum	Occurrence
					°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	°F	%	%	Inches		
Lind Odessa	Washington U.S.S.R.	Ukr	Odessa Oblast	47°00'N 46°29'N	50 49	56 52	44 46	72 72	80 76	63 68	27 25	31 27	24 23	64 72	52 64	16 14	Fall-Winter Year-Round				
Pullman Debrecen	Washington Hungary	Eastern		46°44'N 47°36'N	48 50	53 54	44 45	68 69	75 75	62 63	28 27	31 30	25 24	62 74	49 64	19 23	Fall-Winter Spring-Sum.-Fall				
Sandpoint Krakow	Idaho Poland	Southern	Krakow	48°17'N 50°04'N	46 48	51 51	40 44	66 66	74 71	57 62	25 27	28 30	22 24	64 78	52 69	32 29	Fall-Winter Spring-Summer				
Moscow Prerov	Idaho Czechoslovakia	Central	Moravia	46°44'N 49°27'N	48 48	53 52	43 43	67 66	75 72	59 60	28 30	31 32	24 27	62 74	49 64	22 25	Fall-Winter Spring-Sum-Fall				
Lviv Chernovtsy	U.S.S.R. Ukraine	Ukraine	Lvov Oblast	49°50'N 48°17'N	46 47	50 51	43 43	68 68	73 73	63 63	25 24	28 27	22 21	72 76	65 67	24 25	Spring-Summer Spring-Summer				
Cluj	U.S.S.R. Romania	Northern	Chernovtsy Oblast	46°47'N	48 53	53 43	43 43	68 68	73 73	62 62	24 24	28 28	21 21	74 74	63 63	24 24	Spring-Summer				
Logan Van	Utah Turkey	Eastern		41°44'N 38°28'N	48 48	54 53	43 42	74 70	81 77	66 63	23 26	27 30	19 22	56 55	45 n.a.	17 16	Fall-Winter-Sprg- Winter-Spring				
Nephi Osh	Utah U.S.S.R.	Central Asia	Kirgiz S.S.R.	39°42'N 40°33'N	52 52	59 n.a.	44 n.a.	76 76	85 n.a.	67 n.a.	27 27	33 n.a.	21 n.a.	52 61	38 47	14 13	Fall-Winter-Sprg- Spring				
Ura-Tyube	U.S.S.R.	Central Asia	Tadzhik S.S.R.	39°54'N	52 n.a.	n.a.	n.a.	76 n.a.	n.a.	n.a.	27 n.a.	n.a.	n.a.	n.a.	n.a.	47 13	Spring				
Panguitch Iskander-Kul	Utah U.S.S.R.	Central Asia	Tadzhik S.S.R.	37°52'N 39°06'N	43 44	52 n.a.	34 n.a.	64 65	74 n.a.	54 n.a.	22 21	30 n.a.	14 n.a.	52 n.a.	38 34	9 8	Summer Spring				

TABLE B

GLOBAL CLIMATIC ANALOGUES FOR THE SPRING-CROP SEASON¹ IN THE INTERMOUNTAIN REGION OF THE UNITED STATES

STATION	COUNTRY (State of U.S.)	REGION OF COUNTRY	PROVINCE	LATITUDE	T E M P E R A T U R E												RELATIVE HUMIDITY FOR SEASON		Seven Mo. Amount	Maximum Occurrence (During Year)
					SEVEN-MONTH SEASON			WARMEST MONTH OF SEASON			COOLEST MONTH OF SEASON			RELATIVE HUMIDITY FOR SEASON						
					SEVEN-MONTH SEASON			WARMEST MONTH OF SEASON			COOLEST MONTH OF SEASON			RELATIVE HUMIDITY FOR SEASON						
					Mean	Day	Night	Mean	Day	Night	Mean	Day	Night	Mean	Day	Night	Mean	Day		Min.
Lind Sevastopol	Washington U.S.S.R.	Ukraine	Crimea Oblast	47°00'N 44°37'N	60	67	52	72	80	63	42	47	36	54	38		5	Fall-Winter		
					60	64	57	72	76	68	40	43	38	68	61		6	Year-Round		
Farmington Erivan	Utah U.S.S.R.	Caucasus	Armenian S.S.R.	40°59'N 40°10'N	62	69	54	76	84	67	41	47	35	46	32		10	Fall-Win.-Sprg.		
					65	72	58	78	86	70	40	45	35	51	38		7	Spring		
Provo Usak Konya	Utah Turkey Turkey	West Central South Central		40°13'N 38°40'N 37°51'N	59	69	50	73	83	63	40	47	33	46	52		7	Fall-Win.-Sprg.		
					61	67	54	72	79	65	42	46	37	59	n.a.		8	Fall-Winter		
					61	68	54	72	79	66	40	46	35	49	n.a.		6	Fall-Win.-Sprg.		
Nephi Ankara	Utah Turkey	Central		39°42'N 39°57'N	62	70	53	76	85	67	40	47	34	42	26		7	Fall-Win.-Sprg.		
					61	68	55	73	80	66	41	46	36	50	35		7	Fall-Win. Sprg.		

1. Northern Hemisphere: March through September (Southern Hemisphere - no analogues).

TABLE C
YEAR-ROUND GLOBAL THERMAL ANALOGUES OF THE INTERMOUNTAIN REGION OF THE UNITED STATES

STATION	COUNTRY (State of U.S.)	REGION OF COUNTRY	PROVINCE	LATITUDE	T E M P E R A T U R E												ANNUAL RELATIVE HUMIDITY				
					ANNUAL				WARMEST MONTH				COOLEST MONTH								
					Mean		Day Night		Mean		Day Night		Mean		Day Night						
					Mean	° F	Day	° F	Mean	° F	Day	° F	Mean	° F	Day	° F	Mean	° F	Day	° F	Mean
Pullman	Washington	Eastern	Slovakia	46°44'N	48	53	44	62	68	75	62	28	31	25	62	49	62	49			
Zvolen	Czechoslovakia	Southern	Steiermark	48°35'N	49	52	46	65	69	72	65	29	31	27	65	59	73	59			
Graz	Austria	Central	Bosnia	47°04'N	48	52	45	63	68	72	63	28	31	25	60	60	72	60			
Sarajevo	Yugoslavia			43°52'N	50	55	46	62	68	75	62	30	34	27	68	56	68	56			
Prosser	Washington	Northern		46°15'N	51	58	45	62	71	80	62	30	33	26	62	46	62	46			
Budapest	Hungary	Southern		47°11'N	52	56	48	66	72	77	66	30	33	28	69	58	69	58			
Bucharest	Romania	Southeastern	Serbia	44°25'N	52	57	47	67	74	80	67	27	30	23	71	55	71	55			
Nir	Yugoslavia			43°20'N	53	58	48	66	72	79	66	32	36	29	71	59	71	59			
Sandpoint	Idaho	Southwestern		48°17'N	46	51	40	57	66	74	57	25	28	22	64	52	64	52			
Wroclaw	Poland	Ukraine	Kiev Oblast	51°07'N	48	52	44	61	66	70	61	30	33	27	76	67	76	67			
Kiev	U.S.S.R.			50°27'N	46	49	42	63	68	73	63	22	24	19	74	65	74	65			
Moscow	Idaho	Western	Tirol	46°44'N	48	53	43	59	67	75	59	28	31	24	62	49	62	49			
Innsbruck	Austria			47°16'N	48	53	44	61	66	72	61	27	31	23	70	54	70	54			
Logan	Utah	Central Asia	Kazakh S.S.R.	41°44'N	48	54	43	66	74	81	66	23	27	19	56	45	56	45			
Dzhanbul	U.S.S.R.	Southern		42°54'N	49	n.a.	n.a.	n.a.	74	n.a.	n.a.	23	n.a.	n.a.	65	49	65	49			
Wonsan	North Korea			39°11'N	51	55	47	71	74	78	71	26	30	21	65	55	65	55			
Nephi	Utah	Central Asia	Tadzhik S.S.R.	39°42'N	52	59	44	67	76	85	67	27	33	21	52	38	52	38			
Sangiston	U.S.S.R.			39°23'N	52	n.a.	n.a.	n.a.	75	n.a.	n.a.	28	n.a.	n.a.	n.a.	31	n.a.	n.a.	31		

TABLE D
GLOBAL THERMAL ANALOGUES FOR THE SPRING-CROP SEASON¹ IN THE INTERMOUNTAIN REGION OF THE UNITED STATES

STATION	COUNTRY (State of U.S.)	REGION OF COUNTRY	PROVINCE	LATITUDE	T E M P E R A T U R E												RELATIVE HUMIDITY FOR SEASON		
					SEVEN-MONTH SEASON			WARMEST MONTH OF SEASON			COOLEST MONTH OF SEASON								
					Mean	Day	Night	Mean	Day	Night	Mean	Day	Night	Mean	Day	Night	Mean	Day	Min.
					° F	° F	° F	° F	° F	° F	° F	° F	° F	° F	° F	° F	%	%	
Pullman Stuttgart	Washington West Germany	Southern	Württemberg	46°44'N 48°47'N	57 57	63 62	51 52	68 66	75 71	62 61	39 42	43 45	36 39	52 68	36 58				
Tetonia Kars	Idaho Turkey	Northeastern		43°49'N 40°36'N	50 50	60 57	41 43	63 64	72 72	54 56	27 23	32 29	21 17	46 66	32 n.a.				
Logan Chiu-Chuan	Utah China	Northern	Kansu	41°44'N 39°46'N	59 60	66 66	53 54	74 74	81 81	66 68	37 36	42 42	32 30	46 38	32 n.a.				
Parmington Tai Yuan Tbilisi	Utah China U.S.S.R.	Northern West Caucasus	Shansi Georgian S.S.R.	40°59'N 37°54'N 41°43'N	62 63 63	69 70 68	54 57 58	76 78 74	84 83 70	67 72 69	41 38 43	47 46 47	35 31 39	46 59 59	32 n.a. 44				

1. Northern Hemisphere: March through September (Southern Hemisphere -- no analogues).

TABLE 1

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3

Toppenish, Wash.
Latitude 46°19'N

Variety	Year	Date Sown	Date Harvested	SOWN-TO-HARVEST		YIELDS	
				No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
US 22/3 (028)	1951	Apr. 16	Oct. 9	176	4,731	25.88	16.33
US 22/3 (7-22)	1949	Apr. 8	Oct. 10-11	186	4,930	35.04	16.36
US 22/3 (824)	1949	Apr. 8	Oct. 10-11	186	4,930	31.55	17.12
US 22/3 (828)	1949	Apr. 8	Oct. 10-11	186	4,930	33.37	16.76
US 22/3 (828)	1951	Apr. 16	Oct. 9	176	4,731	26.18	16.53
US 22/3 (829)	1949	Apr. 8	Oct. 10-11	186	4,930	35.54	16.51
US 22/3 (830)	1949	Apr. 8	Oct. 10-11	186	4,930	34.96	16.71
Mean				183	4,873	31.79	16.62
Standard Deviation				5	102	4.21	.26
Coefficient of Variation (%)				2.7	2.1	13.2	1.6

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 2

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3

Jerome, Idaho
Latitude 42°44'N

Variety	Year	Date Sown	Date Harvested	SOWN-TO-HARVEST		YIELDS	
				No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
US 22/3 (or 32)	1946	May 9	Oct. 14-16	159	3,880	18.41	16.27
US 22/3 (or 43)	1946	May 9	Oct. 14-16	159	3,880	19.64	16.37
US 22/3 (or 51)	1946	May 9	Oct. 14-16	159	3,880	19.89	16.42
US 22/3 (or 52)	1946	May 9	Oct. 14-16	159	3,880	19.78	16.76
US 22/3 (or 53)	1946	May 9	Oct. 14-16	159	3,880	19.66	16.70
Mean				159	3,880	19.48	16.50
Standard Deviation				0	0	.53	.23
Coefficient of Variation (%)				0	0	2.7	1.4

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 3
1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3 (Commercial Check)

Lewiston, Utah
Latitude 41°58'N

Crop Year *	Date Sown	Date ** Harvested	SOWN-TO-HARVESTED		Beets: per Acre (tons)	YIELDS	
			No. of Days	Summation of Day-Degrees (°F.)		Sucrose Content (percent)	Gross ^{2/} Sugar per Acre (tons)
1951	Apr. 16	Oct. 20-21	188	3,537	21.76	15.59	3.392
1954	Apr. 20	Oct. 8	171	3,619	26.06	15.41	4.016
1956	Apr. 10	Oct. 11	184	3,780	26.59	17.54	4.665
1957	Apr. 16	Oct. 11	178	3,572	25.62	15.94	4.084
Mean			180	3,627	25.01	16.12	4.039
Standard Deviation			7	96	2.3	.89	.420
Coefficient of Variation (%)			3.9	2.6	8.1	5.5	10.4

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

* Some years were not included in this series due to lack of either phenological records or temperature data.

** Day-degree computations were made on the basis of averages of dates indicated.

TABLE 4

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3 (Commercial Check)

Twin Falls, Idaho
Latitude 42°32'N

Crop Year *	Date Sown	Date ** Harvested	SOWN-TO-HARVESTED		YIELDS		
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross ^{2/} Sugar per Acre (tons)
1951	Apr. 5	Oct. 13 - 15	192	3,754	23.23	14.95	3.473
1953	Apr. 21	Oct. 14	177	3,886	24.28	18.07	4.387
1953	Apr. 21	Oct. 14	177	3,886	24.84	16.43	4.081
1954	Apr. 14	Oct. 12	181	4,040	29.87	17.83	5.326
1956	Apr. 7	Oct. 20	196	4,215	30.40	15.48	4.706
1957	Apr. 25	Oct. 16	174	4,081	29.81	15.60	4.650
Mean -----			183	3,977	27.07	16.39	4.437
Standard Deviation -----			9	169	3.71	1.32	.573
Coefficient of Variation -----			4.9	4.2	13.7	8.1	12.9

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets.

* Data for 1952 and 1955 not available.

** Day-degree computations were made on the basis of averages of dates indicated.

TABLE 5

^{1/}
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3 (Commercial Check)

Nampa, Idaho
Latitude 43°37'N

Crop Year *	Date Sown	Date Harvested	SOWN-TO-HARVESTED		Beets: per Acre (tons)	YIELDS	
			No. of Days	Summation of Day-Degrees (°F.)		Sucrose Content (percent)	Gross ^{2/} Sugar per Acre (tons)
1953	Apr. 23	Oct. 1	161	3,802	24.34	14.76	3.592
1954	Mar. 29	Oct. 29	214	4,320	28.71	17.13	4.918
1956	Apr. 15	Oct. 9	177	4,178	22.22	15.10	3.355
1957	Apr. 12	Oct. 12	183	4,208	28.75	14.97	4.304
Mean			184	4,127	26.00	15.49	4.042
Standard Deviation			19	204	3.41	1.03	.713
Coefficient of Variation (%)			10.3	4.9	13.1	6.7	17.6

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

^{1/} Computed above 40°F. base.

^{2/} Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

* Data for year 1955 not available.

TABLE 6

1/

PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3

Idaho Falls, Idaho
Latitude 43°29'N

Variety	Year	Date Sown	Date * Harvested	SOWN-TO-HARVEST		YIELDS	
				No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
US 22/3 (028)	1951	Apr. 14	Sept. 2-5-8	144	2,771	15.22	18.15
US 22/3 (828)	1951	Apr. 14	Sept. 2-5-8	144	2,771	16.35	17.92
Mean -----				144	2,771	15.78	18.04

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 7

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3
3 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

Station and Variety	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
<u>Toppenish, Wash.</u>								
US 22/3 (028)	46°19'N	1951	Apr. 16	Oct. 9	176	4,731	25.88	16.33
US 22/3 (7-22)		1949	Apr. 8	Oct. 10-11	186	4,930	35.04	16.36
US 22/3 (824)		1949	Apr. 8	Oct. 10-11	186	4,930	31.55	17.12
US 22/3 (828)		1949	Apr. 8	Oct. 10-11	186	4,930	33.37	16.76
US 22/3 (828)		1951	Apr. 16	Oct. 9	176	4,731	26.18	16.53
US 22/3 (829)		1949	Apr. 8	Oct. 10-11	186	4,930	35.54	16.51
US 22/3 (830)		1949	Apr. 8	Oct. 10-11	186	4,930	34.96	16.71
<u>Idaho Falls, Idaho</u>								
US 22/3 (028)	43°29'N	1951	Apr. 14	Sept. 2-5-8	144	2,771	15.22	18.15
US 22/3 (828)		1951	Apr. 14	Sept. 2-5-8	144	2,771	16.35	17.92
<u>Jerome, Idaho</u>								
US 22/3 (or 32)	42°44'N	1946	May 9	Oct. 14-16	159	3,880	18.41	16.27
US 22/3 (or 43)		1946	May 9	Oct. 14-16	159	3,880	19.64	16.37
US 22/3 (or 51)		1946	May 9	Oct. 14-16	159	3,880	19.89	16.42
US 22/3 (or 52)		1946	May 9	Oct. 14-16	159	3,880	19.78	16.76
US 22/3 (or 53)		1946	May 9	Oct. 14-16	159	3,880	19.66	16.70
Mean					169	4,218	25.10	16.78
Standard Deviation					18	821	8.37	.51
Coefficient of Variation (%)					11.0	19.5	33.3	3.0

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

PHENOLOGY, DAY-DEGREE SUMMATIONS AND YIELDS OF SUGAR BEETS - Variety US 22/3 (Commercial Check)
5 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year *	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS		
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross-2/ Sugar per Acre (tons)
<u>Idaho</u>									
Nampa	43°37'N	1953	Apr. 23	Oct. 1	161	3,802	24.34	14.76	3.592
"	"	1954	Mar. 29	Oct. 29	214	4,320	28.71	17.13	4.918
"	"	1956	Apr. 15	Oct. 9	177	4,178	22.22	15.10	3.355
"	"	1957	Apr. 12	Oct. 12	183	4,208	28.75	14.97	4.304
Minidoka	42°40'N	1954	Apr. 10	Oct. 5	178	3,940	22.59	17.26	3.899
Burley	42°32'N	1956	Apr. 14	Oct. 12	181	4,233	27.66	16.52	4.570
"	"	1957	Apr. 9	Oct. 14	188	4,513	29.63	15.78	4.676
Twin Falls	"	1951	Apr. 5	Oct. 13, 15	192	3,754	23.23	14.95	3.473
"	"	1953	Apr. 21	Oct. 14	177	3,886	24.28	18.07	4.387
"	"	1953	Apr. 21	Oct. 14	177	3,886	24.84	16.43	4.081
"	"	1954	Apr. 14	Oct. 12	181	4,040	29.87	17.83	5.326
"	"	1956	Apr. 7	Oct. 20	196	4,215	30.40	15.48	4.706
"	"	1957	Apr. 25	Oct. 16	174	4,081	29.81	15.60	4.650
<u>Utah</u>									
Lewiston	41°58'N	1951	Apr. 16	Oct. 20-21	188	3,537	21.76	15.59	3.392
"	"	1954	Apr. 20	Oct. 8	171	3,619	26.06	15.41	4.016
"	"	1956	Apr. 10	Oct. 11	184	3,780	26.59	17.54	4.665
"	"	1957	Apr. 16	Oct. 11	178	3,572	25.62	15.94	4.084
Mean	-----				182	3,974	26.26	16.14	4.241
Standard Deviation	-----				10	294	3.15	1.15	.595
Coefficient of Variation (%)	-----				5.5	7.4	12.0	7.1	14.0

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service,
U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

* Some years were not included in this series due to lack of either phenological records or temperature data.

TABLE 9
1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3 (or 96)
Twin Falls, Idaho
Latitude 42°32'N

Crop Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS		
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	2/ Gross Sugar per Acre (tons)
1950	Apr. 17-18	Oct. 19	185	3,626	22.90	14.33	3.286
1951	Apr. 5	Oct. 13-15	192	3,754	20.27	14.89	3.026
1951	Apr. 10	Oct. 23	196	3,773	27.40	15.87	4.349
1952	Apr. 25	n.a.	n.a.	n.a.	30.10	15.98	4.810
1953	Apr. 15	Oct. 15	183	3,922	33.70	16.00	5.392
Mean	-----	-----	189	3,769	26.87	15.41	4.172
Standard Deviation	-----	-----	6	99	5.30	.80	1.019
Coefficient of Variation (%)	-----	-----	3.2	2.6	19.7	5.2	24.4

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

n.a. - not available.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 10

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3 (or 96)

Shelley, Idaho
Latitude 43°22'N

Crop Year	Date* Sown	Date* Harvested	SOWN-TO-HARVESTED		YIELDS		
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross 2/ Sugar per Acre (tons)
1952	n.a.	n.a.	n.a.	n.a.	20.30	17.93	3.613
1953	Apr. 2	Oct. 23-26	205	3,534	21.80	17.67	3.846
1953	n.a.	n.a.	n.a.	n.a.	22.40	18.25	4.094
1954	Apr. 4-15	Oct. 15-23	198	3,591	19.70	17.94	3.532
Mean			202	3,152	21.05	17.95	3.771
Standard Deviation			<u>3/</u>	<u>3/</u>	1.32	.19	.249
Coefficient of Variation (%)			<u>3/</u>	<u>3/</u>	6.3	1.1	6.6

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

3/ Not computed because of small number of cases.

n.a. - not available.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 11

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/J (or 96)

Granger, Utah
Latitude 40°42'N

Crop Year *	Date Sown	Date ** Harvested	SOWN-TO-HARVESTED			YIELDS		
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross ^{2/} per Acre	Sugar per Acre (tons)
1950	Mar. 30	Oct. 9	193	4,398	29.40	15.12	4.439	
1950	Mar. 30	Oct. 9-10	194	4,416	28.00	15.24	4,262	
1951	Apr. 3	Oct. 13-15	194	4,639	29.30	14.22	4.166	
1953	Mar. 25	Oct. 25-26	215	4,898	32.80	16.50	5.412	
Mean			199	4,588	29.88	15.27	4.570	
Standard Deviation			10	227	1.83	.78	.528	
Coefficient of Variation (%)			5.0	4.9	6.1	5.1	11.6	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

* Data for year 1952 not available.

** Day-degree computations were made on the basis of averages of dates indicated.

PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3 (or 96)
9 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year *	Date ** Sown	Date ** Harvested	No. of Days	SOWN-TO-HARVESTED		YIELDS		
						Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross per Acre (tons)	Sugar per Acre
Washington										
Toppenish	46°19'N	1951	Apr. 16	Oct. 9	176	4,731	26.93	15.94	4.293	
"	"	1953	Mar. 5	n.a.	n.a.	n.a.	27.00	16.30	n.a.	
Idaho										
Idaho Falls	43°29'N	1951	Apr. 14	Sept. 2, 5, 8	144	2,771	15.43	17.45	n.a.	
Shelley	43°22'N	1952	n.a.	n.a.	n.a.	n.e.	20.30	17.93	3.613	
"	"	1953	Apr. 2	Oct. 23-26	205	3,534	21.80	17.67	3.846	
"	"	1953	n.a.	n.a.	n.a.	n.a.	22.40	18.25	4.094	
"	"	1954	Apr. 4-15	Oct. 15-23	198	3,591	19.70	17.94	3.532	
Jerome	42°44'N	1950	May 25	Oct. 8	n.a.	n.a.	12.16	n.a.	n.a.	
Twin Falls	42°32'N	1950	Apr. 17-18	Oct. 19	185	3,626	22.90	14.33	3.286	
"	"	1951	Apr. 5	Oct. 13-15	192	3,754	20.27	14.89	3.026	
"	"	1951	Apr. 10	Oct. 23	196	3,773	27.40	15.87	4.349	
"	"	1952	Apr. 25	n.a.	n.a.	n.a.	30.10	15.98	4.810	
"	"	1953	Apr. 15	Oct. 15	183	3,992	33.70	16.00	5.392	
Utah										
Garland	41°44'N	1953	Apr. 15-16	Oct. 22-22	189	4,131	21.10	18.36	3.874	
"	"	1954	Apr. 19-20	Oct. 10-13	176	4,234	19.70	16.76	3.302	
Taylorsville	40°46'N	1950	Mar. 22	Oct. 2	194	4,280	32.90	12.31	4.055	
"	"	1952	Apr. 10	Oct. 27	200	5,252	43.20	13.87	5.992	
"	"	1953	Mar. 24	Oct. 26	216	4,901	42.30	13.70	5.795	
Granger	40°42'N	1950	Mar. 30	Oct. 9	193	4,398	29.40	15.12	4.439	
"	"	1950	Mar. 30	Oct. 9-10	194	4,416	28.00	15.24	4.262	
"	"	1951	Apr. 3	Oct. 13-15	194	4,639	29.30	14.22	4.166	
"	"	1953	Mar. 25	Oct. 25-26	215	4,898	32.80	16.50	5.412	
Gunnison	39°07'N	1954	Apr. 6	Oct. 10-21	193	4,178	23.10	15.82	3.654	
Mean					191	4,172	26.17	15.93	4.260	
Standard Deviation					13.3	586	7.52	1.59	.803	
Coefficient of Variation (%)					7.0	14.0	28.7	10.0	18.8	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture..

1/ Computed above 40°F. base.

2/ Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

n.a. - not available.

* Some years were not included in this series due to lack of either phenological records or temperature data.

** Day-degree computations were made on the basis of averages of dates indicated.

TABLE 13

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety US 22/3 (622)

Granger, Utah
Latitude 40°42'N

Crop Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS		
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross ^{2/} Sugar per Acre (tons)
1948	Apr. 12	Oct. 25-30	199	4,982	24.61	14.21	3.497
1948	Apr 16	Nov. 1-2	200	4,994	21.17	15.10	3.195
1949	Apr. 7	Oct. 5	181	4,871	29.30	12.34	3.620
1949	Apr. 7	Oct. 5	181	4,871	29.10	13.24	3.860
1950	Mar. 30	Oct. 9-10	194	4,416	29.30	14.41	4.222
Mean	-----	-----	191	4,827	26.70	13.86	3.679
Standard Deviation	-----	-----	10	206	3.81	1.08	.363
Coefficient of Variation (%)	-----	-----	5.5	4.3	14.3	7.8	9.9

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 14

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3 (622)

Twin Falls, Idaho
Latitude 42°32'N

Crop Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS		
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	<u>2/</u> Gross Sugar per Acre (tons)
1947	Mar. 28	Oct. 25 - Nov. 18	223	4,992	30.02	18.19	5.457
1948	Apr. 8	Oct. 11-12	187	3,943	25.35	14.58	3.702
1949	Apr. 15	Oct. 18-20	187	4,060	27.90	16.92	4.986
1949	Apr. 15	Oct. 18-20	187	4,060	28.00	16.37	4.579
1950	Apr. 17-18	Oct. 19	185	3,626	23.10	14.31	3.302
Mean			194	4,136	26.87	16.07	4.405
Standard Deviation			15	429	2.66	1.63	.906
Coefficient of Variation (%)			7.7	10.4	9.9	10.1	20.6

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 15

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/3 (622)
6 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date* Harvested	SOWN-TO-HARVESTED		YIELDS		
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross Sugar per Acre (tons)
<u>Idaho</u>									
Sugar City	43°53'N	1948	n.a.	n.a.	n.a.	n.a.	14.00	14.80	n.a.
Jerome	42°44'N	1947	May 20	Oct. 13	146	3,744	15.85	n.a.	n.a.
"	"	1949	June 10	Oct. 25	137	3,352	2.50	n.a.	n.a.
"	"	1950	May 25	Oct. 8	136	3,308	14.60	n.a.	n.a.
Twin Falls	42°32'N	1947	Mar. 28	Oct.25-Nov.18	223	4,992	30.02	18.19	5.457
"	"	1948	Apr. 8	Oct. 11-12	187	3,943	25.35	14.58	3.702
"	"	1949	Apr. 15	Oct. 18-20	187	4,060	27.90	16.92	4.986
"	"	1949	Apr. 15	Oct. 18-20	187	4,060	28.00	16.37	4.579
"	"	1950	Apr.17-18	Oct. 19	185	3,626	23.10	14.31	3.302
<u>Utah</u>									
Taylorsville	40°46'N	1950	Mar. 22	Oct. 2	194	4,280	34.10	11.33	3.859
Granger	40°42'N	1948	Apr. 12	Oct. 25-30	199	4,982	24.61	14.21	3.497
"	"	1948	Apr. 16	Nov. 1-2	200	4,994	21.17	15.10	3.195
"	"	1949	Apr. 7	Oct. 5	181	4,871	29.30	12.34	3.620
"	"	1949	Apr. 7	Oct. 5	181	4,871	29.10	13.24	3.860
"	"	1950	Mar. 30	Oct. 9-10	194	4,416	29.30	14.41	4.222
Riverton	40°30'N	1949	Apr. 12	Oct. 26-27	198	4,713	29.90	13.72	4.093
"	"	1949	Apr. 12	Oct. 26-27	198	4,713	24.90	14.13	3,516
Mean	-----	-----	-----	-----	183	4,308	23.75	14.55	3.991
Standard Deviation	-----	-----	-----	-----	21	641	7.56	1.55	.652
Coefficient of Variation (%)	-----	-----	-----	-----	11.5	14.9	31.8	10.7	16.3

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

n.a. - not available.

* Day-degree computations were made on the basis of averages of dates indicated.

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/2 (222)
3 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year *	Date ** Sown	Date ** Harvested	No. of Days	Summation of Day- Degrees (°F.)	YIELDS					
							Beets: per Acre	Sucrose Content (percent)	2/		Net Sugar per Acre (tons)	
									Gross Sugar	Sugar		
Idaho												
Sugar City	43°53'N	1946	Apr. 24	Nov. 13	203	2,992	20.15	16.34	3.287	n.a.		
Jerome	42°44'N	1946	May 9	Oct. 14-16	159	3,880	19.26	16.91	3.257	2.916		
"	"	1947	May 20	Oct. 13	146	3,744	10.78	n.a.	n.a.	n.a.		
"	"	1948	June 25	Nov. 4	129	2,897	4.60	n.a.	n.a.	n.a.		
Twin Falls	42°32'N	1943	Apr. 11, 15, 18	Oct. 11-12	180	3,980	29.72	16.11	4.788	4.147		
"	"	1944	Apr. 27, 30	Oct. 16-17	173	3,698	23.49	16.08	3.777	3.332		
"	"	1947	Mar. 28	Oct. 25-Nov. 18	223	4,992	29.43	18.36	5.401	n.a.		
Mean					173	3,740	19.63	16.76	4.102	3.465		
Standard Deviation					31	585	8.69	.88	.995	4/		
Coefficient of Variation (%)					17.9	15.6	44.2	5.3	24.3	4/		

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

3/ Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

4/ Not computed because of small number of cases.

n.a. - Not available.

* Some years were not included in this series due to lack of either phenological records or temperature data.

** Day-degree computations were made on the basis of averages of dates indicated.

TABLE 17

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22/4 (92)
2 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
Twin Falls, Idaho	42°32'N	1955	Apr. 22	Oct. 15	176	3,826	29.90	15.30
Taylorsville, Utah	40°46'N	1954	Apr. 8	Oct. 6	181	4,765	30.50	12.84
"	"	1955	Apr. 13	Oct. 10	180	4,514	24.50	12.80
Mean -----					179	4,368	28.30	13.65

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 18

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety US 22 (3d Re.32)

Jerome, Idaho
Latitude 42°44'N

Crop Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS			
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross ^{2/} Sugar per Acre (tons)	Net Sugar ^{3/} per Acre (tons)
1945	Apr. 19	Oct. 25	189	4,060	21.70	16.78	3,641	3,282
1945	May 18	Oct. 26	161	3,740	14.54	16.15	2,348	2,001
1945	June 16	Oct. 29	135	3,252	10.18	n.a.	n.a.	n.a.
1945	July 5	Oct. 31	118	2,840	4.79	n.a.	n.a.	n.a.
Mean	-----	-----	151	3,473	12.80	16.46	2,994	2,642
Standard Deviation	-----	-----	30	535	6.68	n.a.	n.a.	n.a.
Coefficient of Variation (%)	-----	-----	19.9	15.4	52.2	n.a.	n.a.	n.a.

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

3/ Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

n.a. - not available.

TABLE 19

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22 (3d Re.32)
4 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date* Harvested	SOWN-TO-HARVESTED		YIELDS			
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross Sugar per Acre (tons)	Net ^{3/} Sugar per Acre (tons)
Washington Toppenish	46°19'N	1945	Mar. 20	Oct. 8+12	204	4,958	37.41	16.22	6.068	n.a.
Idaho										
Jerome	42°44'N	1945	Apr. 19	Oct. 25	189	4,060	21.70	16.78	3.641	3.282
"	"	1945	May 18	Oct. 26	161	3,740	14.54	16.15	2.348	2.001
"	"	1945	June 16	Oct. 29	135	3,252	10.18	n.a.	n.a.	n.a.
"	"	1945	July 5	Oct. 31	118	2,840	4.79	n.a.	n.a.	n.a.
Utah										
Layton	41°05'N	1945	Apr. 17	Oct. 8-9	175	4,201	25.19	15.96	4.020	3,667
Granger	40°42'N	1945	Apr. 6-7	Oct. 10-16	190	4,294	32.11	15.12	4.855	4.162
"	"	1945	Apr. 6-7	Oct. 10-16	190	4,294	28.72	15.53	4.460	3.903
Mean	-----				170	3,955	21.83	15.96	4.232	3.403
Standard Deviation	-----				30	637	13.17	0.53	1.123	.763
Coefficient of Variation	-----				17.6	16.1	60.32	3.3	26.5	22.4

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

3/ Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

n.a. - not available.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 20

^{1/} PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety Imp. US 22 (097)

Granger, Utah
Latitude 40°42'N

Crop Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS			
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross ^{2/} per Acre (tons)	Sugar Net ^{3/} per Acre (tons)
1940-Field 1	Apr. 13	Nov. 1	202	5,504	27.74	17.67	4.902	4.268
" Field 2	Apr. 13	Oct. 29	199	5,456	28.28	16.93	4.788	4.186
" Field 3	Apr. 13	Nov. 13	214	5,504	31.04	13.96	4.333	3.481
" Field 4	Apr. 13	Oct. 17	187	5,264	30.36	16.41	4.982	4.348
" Field 5	Apr. 13	Nov. 14	215	5,504	33.92	15.56	5.278	4.448
1941	Mar. 28	Oct. 21	207	4,572	30.55	16.84	5.145	4.466
Mean	-----	-----	204	5,301	30.32	16.23	4.905	4.200
Standard Deviation	-----	-----	10	320	1.92	12.25	.288	.306
Coefficient of Variation (%)	-----	-----	4.9	6.0	6.3	7.5	5.9	7.3

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

^{1/} Computed above 40°F. base.

^{2/} Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

^{3/} Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

TABLE 21

1/ PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety Imp. US 22 (097)

Buhl, Idaho
Latitude 42°36'N

Crop Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS			3/ Net Sugar per Acre (tons)
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross Sugar per Acre (tons)	
1940	Apr. 10	Oct. 14	187	4,493	29.39	16.19	4.758	4.413
"	June 6	Oct. 15	131	3,521	11.58	16.28	1.885	1.735
1941	Mar. 7	Oct. 6-7	214	3,867	17.82	16.53	2.946	2.631
"	Apr. 4	Oct. 6-7	186	3,771	18.79	17.63	3.313	2.826
"	May 1	Oct. 6-7	159	3,582	15.66	17.94	2.809	2.363
Mean	-----	-----	175	3,847	18.65	16.91	3.142	2.794
Standard Deviation	-----	-----	31	334	5.45	.872	.896	.828
Coefficient of Variation (%)	-----	-----	17.7	8.7	29.2	5.2	28.5	29.6

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

3/ Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

TABLE 22

1/

PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety Imp. US 22 (097)
4 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date Harvested	No. of Days	Summation of Day-Degrees (°F.)	YIELDS			
							Beets: per Acre (tons)	Sucrose Content (percent)	Gross Per Acre (tons)	Net ^{3/} Sugar per Acre
<u>Idaho</u>										
Buhl	42°36'N	1940	Apr. 10	Oct. 14	187	4,493	29.39	16.19	4.758	4.413
"	"	1940	June 6	Oct. 15	131	3,521	11.58	16.28	1.885	1.735
"	"	1941	Mar. 7	Oct. 6-7	214	3,867	17.82	16.53	2.946	2.631
"	"	1941	Apr. 4	Oct. 6-7	186	3,771	18.79	17.63	3.313	2.826
"	"	1941	May 1	Oct. 6-7	159	3,582	15.66	17.94	2.809	2.363
Twin Falls	42°32'N	1940	Apr. 18-19	Oct. 21-22	187	4,609	32.68	15.70	5.131	4.680
"	"	1941	Apr. 21	Oct. 13-14	176	3,824	28.04	18.05	5.061	4.185
<u>Utah</u>										
Taylorsville	40°46'N	1941	Apr. 1	Oct. 13	195	4,488	24.88	14.10	3.508	3.142
Granger	40°42'N	1940-Field 1	Apr. 13	Nov. 1	202	5,504	27.74	17.67	4.902	4.268
"	"	" Field 2	Apr. 13	Oct. 29	199	5,456	28.28	16.93	4.788	4.186
"	"	" Field 3	Apr. 13	Nov. 13	214	5,504	31.04	13.96	4.333	3.481
"	"	" Field 4	Apr. 13	Oct. 17	187	5,264	30.36	16.41	4.982	4.348
"	"	" Field 5	Apr. 13	Nov. 14	215	5,504	33.92	15.56	5.278	4.448
"	"	1941	Mar. 28	Oct. 21	207	4,572	30.55	16.84	5.145	4.466
Mean					190	4,568	25.77	16.41	4.203	3.655
Standard Deviation					21	793	7.18	1.20	1.173	1.030
Coefficient of Variation (%)					11.1	17.4	27.9	7.3	27.9	28.2

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

3/ Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

TABLE 23

^{1/} PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS -Variety US 22 (2d Re.222)

Granger, Utah
Latitude 40°42' N

Crop Year	Date * Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS			
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross per Acre (tons)	3/ Sugar Net per Acre (tons)
1943-Field 1	Apr. 1	Nov. 5	217	5,233	21.08	16.54	3.487	3.151
" Field 2	Apr. 1	Nov. 5	217	5,233	21.66	16.88	3.656	3.327
" Field 3	Apr. 1	Nov. 5	217	5,233	29.38	15.08	4.431	3.897
" Field 4	Apr. 1	Nov. 5	217	5,233	28.43	14.94	4.247	3.625
1944	Apr. 5-8	Oct. 23-25	203	4,469	20.94	14.82	3.103	2.600
1944	n.a.	n.a.	n.a.	n.a.	24.48	14.08	3.447	2.895
1945	Apr. 6-7	Oct. 10-16	190	4,294	28.71	15.73	4.516	3.961
Mean	-----	-----	210	4,949	24.95	15.44	3.841	3.351
Standard Deviation	-----	-----	12	474	4.17	1.02	.598	.513
Coefficient of Variation (%)	-----	-----	5.7	9.6	16.7	6.6	15.6	15.3

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

^{1/} Computed above 40°F. base.

^{2/} Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

^{3/} Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

n.a. - not available.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 24

^{1/} PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety US 22 (2d Re.222)

Jerome, Idaho
Latitude 42°44'N

Crop Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS			
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross Sugar per Acre (tons)	3/ Net Sugar per Acre (tons)
1945	Apr. 19	Oct. 25	189	4,060	21.24	16.76	3.560	3.178
1945	May 18	Oct. 26	161	3,740	12.73	16.61	2.114	1.787
1945	June 16	Oct. 29	135	3,252	8.62	n.a.	n.a.	n.a.
1945	July 5	Oct. 31	118	2,840	3.40	n.a.	n.a.	n.a.
Mean			151	3,473	11.50	16.68	2.837	2.482
Standard Deviation			30	535	6.88	n.a.	n.a.	n.a.
Coefficient of Variatic			19.9	15.4	59.8	n.a.	n.a.	n.a.

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

^{1/} Computed above 40°F. base.

^{2/} Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

^{3/} Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

n.a. - not available.

TABLE 25

PHENOLOGY, DAY-DEGREE^{1/} SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22 (2d Re.222)
4 UNITED STATES INTERMOUNTAIN STATIONS
 (Stations arranged according to latitude)

State and Station	Latitude	Year	Date * Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS			
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross Sugar per Acre (tons)	Net Sugar per Acre (tons)
<u>Washington</u>										
Toppenish	46°19'N	1945	Mar. 20	Oct. 8-12	204	4,958	36.40	16.37	5.959	n.a.
<u>Idaho</u>										
Jerome	42°44'N	1945	Apr. 19	Oct. 25	189	4,060	21.24	16.76	3.560	3.178
"	"	1945	May 18	Oct. 26	161	3,740	12.73	16.61	2.114	1.787
"	"	1945	June 16	Oct. 29	135	3,252	8.62	n.a.	n.a.	n.a.
"	"	1945	July 5	Oct. 31	118	2,840	3.40	n.a.	n.a.	n.a.
<u>Utah</u>										
Layton	41°05'N	1945	Apr. 17	Oct. 8-9	175	4,201	25.48	16.08	4.097	3.754
Granger	40°42'N	1943 Field 1	Apr. 1	Nov. 5	217	5,233	21.08	16.54	3.487	3.151
"	"	" Field 2	Apr. 1	Nov. 5	217	5,233	21.66	16.88	3.656	3.327
"	"	" Field 3	Apr. 1	Nov. 5	217	5,233	29.38	15.08	4.431	3.897
"	"	" Field 4	Apr. 1	Nov. 5	217	5,233	28.43	14.94	4.247	3.625
"	"	1944	Apr. 5-8	Oct. 23-25	203	4,469	20.94	14.82	3.103	2.600
"	"	1944	n.a.	n.a.	n.a.	n.a.	24.48	14.08	3.447	2.895
"	"	1945	Apr. 6-7	Oct. 10-16	190	4,294	28.71	15.73	4.516	3.961
Mean					187	4,396	21.73	15.81	3.874	3.218
Standard Deviation					33	833	8.18	1.00	.884	.620
Coefficient of Variation (%)					17.6	18.9	37.6	6.3	22.8	19.3

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

^{1/} Computed above 40°F. base.

^{2/} Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

^{3/} Net sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

n.a. - not available.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 26

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety Imp. US 22 (or 222)
2 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date * Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS		
					No. of Days	Summation of Day- Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	2/ Gross Sugar per Acre (tons) 3/ Net Sugar per Acre (tons)
Idaho									
Jerome	42°44'N	1944	May 20	Oct. 24	157	3,758	14.27	n.a.	n.a.
"	"	1944	June 15	Oct. 24	131	3,262	6.14	n.a.	n.a.
"	"	1944	July 2-7	Oct. 25	115	2,927	3.55	n.a.	n.a.
Utah									
Sandy	40°35'N	1943-Field 1	Apr. 18	Oct. 28	193	5,029	26.13	14.08	3.679
	"	" Field 2	Apr. 18	Oct. 28	193	5,029	24.35	16.25	3.957
Mean					158	4,001	14.89	4/ 4/	4/ 4/
Standard Deviation					35	1,031	10.38	4/ 4/	4/ 4/
Coefficient of Variation (%)					22.2	25.7	69.7	4/ 4/	4/ 4/

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

3/ Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

4/ Not computed because of small number of cases.

n.a. - not available.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 27

^{1/}
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety US 22 (722)

Granger, Utah
Latitude 40°42' N

Crop Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS			
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross per Acre (tons)	Net ^{3/} Sugar per Acre (tons)
1939	Apr. 4	Oct. 26	205	4,911	27.42	16.52	4.530	4.026
1940-Field 1	Apr. 13	Nov. 1	202	5,504	26.58	17.88	4.753	4.161
" Field 2	Apr. 13	Oct. 29	199	5,456	28.25	16.82	4.752	4.183
" Field 3	Apr. 13	Nov. 13	214	5,504	29.04	13.75	3.993	3.208
" Field 4	Apr. 13	Oct. 17	187	5,264	29.50	15.59	4.894	4.252
" Field 5	Apr. 13	Nov. 14	215	5,504	31.46	15.41	4.833	4.082
Mean			204	5,357	28.71	16.16	4.626	3.985
Standard Deviation			10	225	1.62	1.32	.305	.325
Coefficient of Variation (%)			4.9	4.2	5.6	8.2	6.6	8.2

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

^{1/} Computed above 40°F. base.

^{2/} Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in beets).

^{3/} Net sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

TABLE 28

TABLE 28

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22 (722)
9 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year *	Date ** Sown	Date ** Harvested	No. of Days	SOWN-TO-HARVESTED			YIELDS			Net Sugar per Acre
						Degrees (°F.)	Summation of Day-	Beets: per Acre (tons)	Sucrose Content (percent)	Gross Sugar (tons)	2/ Sugar per Acre	3/ Net Sugar per Acre
<u>Washington</u>												
Toppenish	46°19'N	1938	Mar. 28	Oct. 28	202	5,358		24.77	15.45	3.827		3.466
"	"	1939	Mar. 27	Oct. 16	203	5,031		26.38	17.24	4.548		4.074
<u>Idaho</u>												
Idaho Falls	43°29'N	1939	Apr. 18-19	Oct. 21	186	3,617		16.53	18.26	3.018		2.655
Buhl	"	1938	Apr. 29	Oct. 12	166	4,027		28.66	16.06	4.600		n.a.
"	"	1939	May 8	n.a.	n.a.	n.a.		24.00	16.38	3.641		n.a.
Twin Falls	42°32'N	1938	Apr. 4-7	Oct. 21	200	4,254		29.58	15.14	4.478		4.018
"	"	1940	Apr. 18-19	Oct. 21-22	187	4,609		32.93	15.60	5.137		4.681
<u>Utah</u>												
Garland	41°44'N	1938	Apr. 9	Nov. 22	227	4,638		35.91	14.01	5.031		4.135
Salt Lake City	40°46'N	1938	Apr. 13	Nov. 2-10	207	4,897		31.70	13.78	4.368		3.730
Granger	40°42'N	1939	Apr. 4	Oct. 26	205	4,911		27.42	16.52	4.530		4.026
"	"	1940-Field 1	Apr. 13	Nov. 1	202	5,504		26.58	17.88	4.753		4.161
"	"	" Field 2	Apr. 13	Oct. 29	199	5,456		28.25	16.82	4.752		4.183
"	"	" Field 3	Apr. 13	Nov. 13	214	5,504		29.04	13.75	3.993		3.208
"	"	" Field 4	Apr. 13	Oct. 17	187	5,264		29.50	16.59	4.894		4.252
"	"	" Field 5	Apr. 13	Nov. 14	215	5,504		31.46	15.41	4.833		4.082
West Jordan	40°32'N	1938	Apr. 14	Oct. 26	195	4,680		16.81	15.97	2.685		2.463
"	"	1939	Apr. 26-27	Oct. 23	180	4,470		17.33	18.28	3.168		2,848
Sevier Valley	38°35'N	1938	Apr. 20	Oct. 18	181	4,314		23.19	15.96	3.701		3.275
Mean					197	4,826		26.67	16.06	4.220		3.704
Standard Deviation					15	589		5.26	1.319	.767		.674
Coefficient of Variation (%)					7.6	12.2		19.7	8.2	18.2		18.2

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40° F. base.

2/ Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

3/ Net sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

n.a. - not available.

* Some years were not included in this series due to lack of either phenological records or temperature data.

** Day-degree computations were made on the basis of averages of dates indicated.

TABLE 29

^{1/}
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety (Orig.) US 22 (922)

Granger, Utah
Latitude 40°42'N

Crop Year*	Date Sown	Date ** Harvested	SOWN-TO-HARVESTED		YIELDS			
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross per Acre (tons)	Net ^{3/} Sugar per Acre (tons)
1940-Field 1	Apr. 13	Nov. 1	202	5,504	25.49	17.80	4.537	3.987
" Field 2	Apr. 13	Oct. 29	199	5,456	28.45	16.38	4.660	4.049
" Field 3	Apr. 13	Nov. 13	214	5,504	28.34	13.62	3.860	3.074
" Field 4	Apr. 13	Oct. 17	187	5,264	28.86	16.54	4.773	4.160
" Field 5	Apr. 13	Nov. 14	215	5,504	32.25	15.67	5.054	4.280
1942	May 11-12	Oct. 26-Nov. 2	172	4,352	25.67	15.51	3.981	3.344
1943-Field 1	Apr. 1	Nov. 5	217	5,233	21.98	16.46	3.618	3.260
" Field 2	Apr. 1	Nov. 5	217	5,233	22.42	16.52	3.704	3.298
" Field 3	Apr. 1	Nov. 5	217	5,233	29.30	15.40	4.512	3.962
Mean			204	5,254	26.97	15.99	4.300	3.713
Standard Deviation			16	268	3.43	1.04	.568	.523
Coefficient of Variation			7.8	5.1	12.7	6.5	13.2	14.1

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

^{1/} Computed above 40°F. base.

^{2/} Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

^{3/} Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

* Data for year 1941 not available.

** Day-degree computations were made on the basis of averages of dates indicated.

TABLE 30

^{1/} PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety (Orig.) US 22 (922)

Buhl, Idaho
Latitude 42°36'N

Crop Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS			
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross ^{2/} per Acre (tons)	Net ^{3/} Sugar per Acre (tons)
1940	Apr. 10	Oct. 14	187	4,493	27.09	16.18	4.383	4.055
1940	June 6	Oct. 15	131	3,521	9.47	16.33	1.546	1.421
1941	Mar. 7	Oct. 6-7	214	3,867	16.97	16.44	2.790	2.474
1941	Apr. 4	Oct. 6-7	186	3,771	16.67	17.46	2.911	2.480
1941	May 1	Oct. 6-7	159	3,582	13.04	18.08	2.358	2.010
Mean			175	3,847	16.65	16.90	2.798	2.488
Standard Deviation			31	334	5.41	.87	.852	.786
Coefficient of Variation (%)			17.7	8.7	32.5	5.1	30.4	31.6

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

^{1/} Computed above 40°F. base.

^{2/} Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

^{3/} Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

TABLE 31

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety (Orig.)US 22(922)

Jerome, Idaho
Latitude 42°44'N

Crop Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS			
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross per Acre (tons)	<u>3/</u> Sugar Net per Acre (tons)
1944	May 20	Oct. 24	157	3,758	12.21	n.a.	n.a.	n.a.
1944	June 15	Oct. 24	131	3,262	5.51	n.a.	n.a.	n.a.
1944	July 2-7	Oct. 25	115	2,927	2.05	n.a.	n.a.	n.a.
1945	June 16	Oct. 29	118	2,840	6.72	n.a.	n.a.	n.a.
1945	July 5	Oct. 31	135	3,252	2.50	n.a.	n.a.	n.a.
1947	May 20	Oct. 13	146	3,744	6.47	n.a.	n.a.	n.a.
1948	June 25	Nov. 4	129	2,897	2.80	n.a.	n.a.	n.a.
Mean			133	3,240	5.47	n.a.	n.a.	n.a.
Standard Deviation			14	378	3.23	n.a.	n.a.	n.a.
Coefficient of Variation (%)			10.5	11.7	5.90	n.a.	n.a.	n.a.

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

3/ Net sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

n.a. - not available.

TABLE 32

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety (Orig.) US 22 (922)
5 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year *	Date ** Sown	Date ** Harvested	SOWN-TO-HARVESTED		YIELDS				
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Gross 2/ Sugar per Acre (tons)	Net 3/ Sugar per Acre (tons)	
Idaho											
Jerome	42°44'N	1944	May 20	Oct. 24	157	3,758	12.21	n.a.	n.a.	n.a.	
"	"	1944	June 15	Oct. 24	131	3,262	5.51	n.a.	n.a.	n.a.	
"	"	1944	July 2-7	Oct. 25	115	2,927	2.05	n.a.	n.a.	n.a.	
"	"	1945	June 16	Oct. 29	118	2,840	6.72	n.a.	n.a.	n.a.	
"	"	1945	July 5	Oct. 31	135	3,252	2.50	n.a.	n.a.	n.a.	
"	"	1947	May 20	Oct. 13	146	3,744	6.47	n.a.	n.a.	n.a.	
"	"	1948	June 25	Nov. 4	129	2,897	2.80	n.a.	n.a.	n.a.	
Buhl	42°36'N	1940	Apr. 10	Oct. 14	187	4,493	27.09	16.18	4.383	4.055	
"	"	1940	June 6	Oct. 15	131	3,521	9.47	16.33	1.546	1.421	
"	"	1941	Mar. 7	Oct. 6-7	214	3,867	16.97	16.44	2.790	2.474	
"	"	1941	Apr. 4	Oct. 6-7	186	3,771	16.67	17.46	2.911	2.480	
"	"	1941	May 1	Oct. 6-7	159	3,582	13.04	18.08	2.358	2.010	
Twin Falls	42°32'N	1940	Apr. 18-19	Oct. 21-22	187	4,609	33.00	15.55	5.131	4.690	
"	"	1941	Apr. 21	Oct. 13-14	176	3,824	28.10	17.80	5.002	4.168	
"	"	1942	Apr. 24	Oct. 13-14	173	3,905	29.76	16.19	4.818	4.068	
"	"	1943	Apr. 11, 15, 18	Oct. 11-12	180	3,980	29.24	15.97	4.670	4.001	
Utah											
Granger	40°42'N	1940-Field 1	Apr. 13	Nov. 1	202	5,504	25.49	17.80	4.537	3.987	
"	"	" Field 2	Apr. 13	Oct. 29	199	5,456	28.45	16.38	4.660	4.049	
"	"	" Field 3	Apr. 13	Nov. 13	214	5,504	28.34	13.62	3.860	3.074	
"	"	" Field 4	Apr. 13	Oct. 17	187	5,264	28.86	16.54	4.773	4.160	
"	"	" Field 5	Apr. 13	Nov. 14	215	5,504	32.25	15.67	5.054	4.280	
"	"	1942	May 11-12	Oct. 26-Nov. 2	172	4,352	25.67	15.51	3.981	3.344	
"	"	1943-Field 1	Apr. 1	Nov. 5	217	5,233	21.98	16.46	3.618	3.260	
"	"	" Field 2	Apr. 1	Nov. 5	217	5,233	22.42	16.52	3.704	3.298	
"	"	" Field 3	Apr. 1	Nov. 5	217	5,233	29.30	15.40	4.512	3.962	
Sandy	40°35'N	1943-Field 1	Apr. 18	Oct. 28	193	5,029	25.95	14.55	3.776	3.327	
"	"	" Field 2	Apr. 18	Oct. 28	193	5,029	24.64	16.22	3.997	3.571	
Mean					176	4,280	19.81	16.23	4.004	3.484	
Standard Deviation					34	1,002	11.47	0.937	.940	.836	
Coefficient of Variation (%)					19.3	23.4	57.9	5.8	23.5	24.0	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Gross Sugar - Estimated total sugar content per acre (tons of beets per acre multiplied by percentage sucrose in the beets).

3/ Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested.

n.a. - not available.

* Some years were not included in this series due to lack of either phenological records or temperature data.

** Day-degree computations were made on the basis of averages of dates indicated.

TABLE 33

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 22
5 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

Variety and Station	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
<u>US 22 (1st Re.922)</u>								
Toppenish, Wash.	46°19'N	1945	Mar. 20	Oct. 8-12	204	4,958	35.31	16.16
<u>US 22 (222)</u>								
Toppenish, Wash.	46°19'N	1946	Mar. 9	Oct. 9-10	215	4,848	34.81	15.58
Blackfoot, Idaho	43°11'N	1946	n.a.	n.a.	---	---	20.33	17.50
<u>Orig. US 22</u>								
Jerome, Idaho	42°44'N	1948	May 20	Nov. 4	168	3,773	16.40	---
Buhl, Idaho	42°36'N	1939	Apr. 21	Oct. 20	182	4,333	29.11	17.13
<u>US 22 (or 022)</u>								
Twin Falls, Idaho	42°32'N	1941	Apr. 21	Oct. 13-14	176	3,824	28.18	17.02
<hr/>								
Mean	-----	-----	-----	-----	189	4,347	27.36	16.68
Standard Deviation	-----	-----	-----	-----	21	557	7.51	.81
Coefficient of Variation (%)	-----	-----	-----	-----	11.1	12.8	27.4	4.9

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 34

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety US 7 (87)

Buhl, Idaho
Latitude 42°36'N

Crop Year	Date Sown	Date Harvested	No. of Days	Summation of Day-Degrees (°F.)	YIELDS	
					Beets: per Acre (tons)	Sucrose Content (percent)
1939	May 8	n.a.	n.a.	n.a.	23.25	16.69
1940	Apr. 10	Oct. 14	187	4,493	27.04	16.09
1940	June 6	Oct. 15	131	3,521	10.00	15.84
1941	Mar. 7	Oct. 6-7	214	3,867	16.80	16.45
1941	Apr. 4	Oct. 6-7	186	3,771	16.24	17.53
1941	May 1	Oct. 6-7	159	3,582	11.90	17.62
Mean	-----	-----	175	3,847	17.54	16.70
Standard Deviation	-----	-----	31	334	6.35	.73
Coefficient of Variation (%)	-----	-----	17.7	8.7	36.2	4.4

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 35

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety US 7 (87)

Granger, Utah
Latitude 40°42'N

Crop Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
			No. of Days	Summation of Day-Degrees (°F)	Beets: per Acre (tons)	Sucrose Content (percent)
1939	Apr. 4	Oct. 26	205	4,911	27.23	16.73
1940-Field 1	Apr. 13	Nov. 1	202	5,504	25.73	17.63
" Field 2	Apr. 13	Oct. 29	199	5,456	28.27	16.60
" Field 3	Apr. 13	Nov. 13	214	5,504	27.70	13.38
" Field 4	Apr. 13	Oct. 17	187	5,264	29.16	15.97
" Field 5	Apr. 13	Nov. 14	215	5,504	31.68	15.27
1941	Mar. 28	Oct. 21	207	4,572	30.37	16.89
Mean			204	5,245	28.59	16.07
Standard Deviation			9	361	1.94	1.28
Coefficient of Variation (%)			4.4	6.9	6.8	8.0

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 36

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 7 (87)
3 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
Utah								
Taylorsville	40°46'N	1941	Apr. 1	Oct. 13	195	4,488	25.18	13.86
Granger	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	27.23	16.73
"	"	1940-Field 1	Apr. 13	Nov. 1	202	5,504	25.73	17.63
"	"	" Field 2	Apr. 13	Oct. 29	199	5,456	28.27	16.60
"	"	" Field 3	Apr. 13	Nov. 13	214	5,504	27.70	13.38
"	"	" Field 4	Apr. 13	Oct. 17	187	5,264	29.16	15.97
"	"	" Field 5	Apr. 13	Nov. 14	215	5,504	31.68	15.27
"	"	1941	Mar. 28	Oct. 21	207	4,572	30.37	16.89
West Jordan	40°32'N	1939	Apr. 26-27	Oct. 23	180	4,470	17.08	18.33
Mean	-----	-----	-----	-----	200	5,075	26.93	16.07
Standard Deviation	-----	-----	-----	-----	11	517	3.57	1.62
Coefficient of Variation (%)	-----	-----	-----	-----	5.5	10.2	13.3	10.1

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 37

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 7 (87)
5 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED			YIELDS		
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)		
<u>Idaho</u>										
Buhl	42°36'N	1939	May 8	n.a.	n.a.	n.a.	23.25	16.69		
"	"	1940	Apr. 10	Oct. 14	187	4,493	27.04	16.09		
"	"	1940	June 6	Oct. 15	131	3,521	10.00	15.84		
"	"	1941	Mar. 7	Oct. 6-7	214	3,867	16.80	16.45		
"	"	1941	Apr. 4	Oct. 6-7	186	3,771	16.24	17.53		
"	"	1941	May 1	Oct. 6-7	159	3,582	11.90	17.62		
Twin Falls	42°32'N	1940	Apr. 18-19	Oct. 21-22	187	4,609	32.25	15.84		
"	"	1941	Apr. 21	Oct. 13-14	176	3,824	28.02	17.61		
<u>Utah</u>										
Taylorsville	40°46'N	1941	Apr. 1	Oct. 13	195	4,488	25.18	13.86		
Granger	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	27.23	16.73		
"	"	1940-Field 1	Apr. 13	Nov. 1	202	5,504	25.73	17.63		
"	"	" Field 2	Apr. 13	Oct. 29	199	5,456	28.27	16.60		
"	"	" Field 3	Apr. 13	Nov. 13	214	5,504	27.70	13.38		
"	"	" Field 4	Apr. 13	Oct. 17	187	5,264	29.16	15.97		
"	"	" Field 5	Apr. 13	Nov. 14	215	5,504	31.68	15.27		
"	"	1941	Mar. 28	Oct. 21	207	4,572	30.37	16.89		
West Jordan	40°32'N	1939	Apr. 26-27	Oct. 23	180	4,470	17.08	18.33		
Mean	-----		-----	-----	190	4,584	23.99	16.37		
Standard Deviation	-----		-----	-----	21	731	7.18	1.23		
Coefficient of Variation (%)	-----		-----	-----	11.1	15.9	29.9	7.5		

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

n.a. - not available.

TABLE 38

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 7 (87)
7 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day Degrees ($^{\circ}$ F.)	Beets: per Acre (tons)	Sucrose Content (percent)
<u>Washington</u> Toppenish	46°19'N	1939	Mar. 27	Oct. 16	203	5,031	26.16	17.15
<u>Idaho</u> Idaho Falls	43°29'N	1939	Apr. 18-19	Oct. 21	186	3,617	16.30	18.22
Buhl	42°36'N	1939	May 8	n.a.	n.a.	n.a.	23.25	16.69
"	"	1940	Apr. 10	Oct. 14	187	4,493	27.04	16.09
"	"	1940	June 6	Oct. 15	131	3,521	10.00	15.84
"	"	1941	Mar. 7	Oct. 6-7	214	3,867	16.80	16.45
"	"	1941	Apr. 4	Oct. 6-7	186	3,771	16.24	17.53
"	"	1941	May 1	Oct. 6-7	159	3,582	11.90	17.62
Twin Falls	42°32'N	1940	Apr. 18-19	Oct. 21-22	187	4,609	32.25	15.84
"	"	1941	Apr. 21	Oct. 13-14	176	3,824	28.02	17.61
<u>Utah</u> Taylorsville	40°46'N	1941	Apr. 1	Oct. 13	195	4,488	25.18	13.86
Granger	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	27.23	16.73
"	"	1940-Field 1	Apr. 13	Nov. 1	202	5,504	25.73	17.63
"	"	" Field 2	Apr. 13	Oct. 29	199	5,456	28.27	16.60
"	"	" Field 3	Apr. 13	Nov. 13	214	5,504	27.70	13.38
"	"	" Field 4	Apr. 13	Oct. 17	187	5,264	29.16	15.97
"	"	" Field 5	Apr. 13	Nov. 14	215	5,504	31.68	15.27
"	"	1941	Mar. 28	Oct. 21	207	4,572	30.37	16.89
West Jordan	40°32'N	1939	Apr. 26-27	Oct. 23	180	4,470	17.08	18.33
Mean	-----	-----	-----	-----	191	4,555	23.70	16.51
Standard Deviation	-----	-----	-----	-----	19	747	7.16	1.24
Coefficient of Variation (%)	-----	-----	-----	-----	9.9	16.4	30.2	7.5

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

n.a. - not available.

TABLE 39

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety US 10 (or 910)

Granger, Utah
Latitude 40°42'N

Crop Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED			YIELDS	
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	
1940-Field 1	Apr. 13	Nov. 1	202	5,504	24.90	18.36	
" Field 2	Apr. 13	Oct. 29	199	5,456	26.24	17.75	
" Field 3	Apr. 13	Nov. 13	214	5,504	25.66	14.24	
" Field 4	Apr. 13	Oct. 17	187	5,264	26.25	17.08	
" Field 5	Apr. 13	Nov. 14	215	5,504	30.11	15.93	
Mean -----			203	5,446	26.63	16.67	
Standard Deviation -----			11	92	1.74	1.59	
Coefficient of Variation (%)-----			5.4	1.7	6.5	9.5	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 40

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 10 (or 910)
2 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (^o F.)	Beets: per Acre (tons)	Sucrose Content (percent)
<u>Idaho</u>								
Twin Falls	42°32'N	1940	Apr. 18-19	Oct. 21-22	187	4,609	29.67	16.33
<u>Utah</u>								
Granger	40°42'N	1940-Field 1	Apr. 13	Nov. 1	202	5,504	24.90	18.36
"	"	" Field 2	Apr. 13	Oct. 29	199	5,456	26.24	17.75
"	"	" Field 3	Apr. 13	Nov. 13	214	5,504	25.66	14.24
"	"	" Field 4	Apr. 13	Oct. 17	187	5,264	26.25	17.08
"	"	" Field 5	Apr. 13	Nov. 14	215	5,504	30.11	15.93
<hr/>								
Mean	-----	-----	-----	-----	201	5,307	27.14	16.62
Standard Deviation	-----	-----	-----	-----	12	309	2.31	1.40
Coefficient of Variation (%)	-----	-----	-----	-----	6.0	5.8	8.5	8.4

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 41

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 10 (or 610)
5 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
<u>Utah</u>								
Garland	41°44'N	1938	Apr. 9	Nov. 22	227	4,638	32.93	14.40
Salt Lake City	40°46'N	1938	Apr. 13	Nov. 2-10	207	4,897	26.80	15.10
Granger	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	25.14	17.48
West Jordan	40°32'N	1933	Apr. 14	Oct. 26	195	4,680	15.29	16.31
" "	"	1939	Apr. 26-27	Oct. 23	180	4,470	15.72	18.90
Sevier Valley	38°35'N	1938	Apr. 20	Oct. 18	181	4,314	20.83	16.41
Mean	-----	-----	-----	-----	199	46.52	22.79	16.43
Standard Deviation	-----	-----	-----	-----	17	223	6.89	1.47
Coefficient of Variation (%)	-----	-----	-----	-----	8.5	4.8	30.2	8.9

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 42

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 10 (or 610)
7 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date * Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
<u>Idaho</u>								
Buhl	42°36'N	1938	Apr. 29	Oct. 12	166	4,027	25.26	15.96
Twin Falls	42°32'N	1938	Apr. 4-7	Oct. 21	200	4,254	25.67	15.53
<u>Utah</u>								
Garland	41°44'N	1938	Apr. 9	Nov. 22	227	4,638	32.93	14.40
Salt Lake City	40°46'N	1938	Apr. 13	Nov. 2-10	207	4,897	26.80	15.10
Granger Utah	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	25.14	17.48
West Jordan	40°32'N	1938	Apr. 14	Oct. 26	195	4,680	15.29	16.31
"	"	1939	Apr. 26-27	Oct. 23	180	4,470	15.72	18.90
Sevier Valley	38°35'N	1938	Apr. 20	Oct. 18	181	4,314	20.83	16.41
Mean	-----		-----	-----	195	4,524	23.46	16.26
Standard Deviation	-----		-----	-----	18	323	5.80	1.27
Coefficient of Variation (%)	-----		-----	-----	9.2	7.1	24.7	7.8

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 43

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 10 (or 610)
9 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date * Sown	Date * Harvested	SOWN-TO-HARVESTED			YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	
Washington									
Toppenish	46°19'N	1938	Mar. 28	Oct. 16	202	5,358	20.21	15.62	
"	"	1939	Mar. 27	Oct. 16	203	5,031	23.18	17.74	
Idaho									
Idaho Falls	43°29'N	1939	Apr. 18-19	Oct. 21	186	3,617	16.32	18.51	
Buhl	42°36'N	1938	Apr. 29	Oct. 12	166	4,027	25.26	15.96	
Twin Falls	42°32'N	1938	Apr. 4-7	Oct. 21	200	4,254	25.67	15.53	
Utah									
Garland	41°44'N	1938	Apr. 9	Nov. 22	227	4,638	32.93	14.40	
Salt Lake City	40°46'N	1938	Apr. 13	Nov. 2-10	207	4,897	26.80	15.10	
Granger	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	25.14	17.48	
West Jordan	40°32'N	1938	Apr. 14	Oct. 26	195	4,680	15.29	16.31	
"	"	1939	Apr. 26-27	Oct. 23	180	4,470	15.72	18.90	
Sevier Valley	38°35'N	1938	Apr. 20	Oct. 18	181	4,314	20.83	16.41	
Mean	-----			-----	196	4,563	22.49	16.54	
Standard Deviation	-----			-----	16	487	5.48	1.47	
Coefficient of Variation (%)	-----			-----	8.2	10.7	24.4	8.9	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 44

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 11 (711)
4 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
<u>Utah</u>								
Garland	41°44' N	1938	Apr. 9	Nov. 22	227	4,638	36.29	14.13
Salt Lake City	40°46' N	1938	Apr. 13	Nov. 2-10	207	4,897	27.49	14.06
West Jordan	40°32' N	1938	Apr. 14	Oct. 26	195	4,680	16.46	16.44
Sevier Valley	38°35' N	1938	Apr. 20	Oct. 18	181	4,314	22.11	16.06
<hr/>								
Mean	-----			-----	202	4,632	25.59	15.17
Standard Deviation	-----			-----	18	200	7.90	1.35
Coefficient of Variation (%)	-----			-----	8.9	4.3	30.9	8.9

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 45

^{1/}
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 11 (711)
6 UNITED STATES INTERMOUNTAIN STATIONS
 (Stations arranged according to latitude)

State and Station	Latitude	Year	Date *	Date *	SOWN-TO-HARVESTED		YIELDS		
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	
									Harvested
<u>Idaho</u>									
Buhl	42°36'N	1938	Apr. 29	Oct. 12	166	4,027	28.27	15.80	
Twin Falls	42°32'N	1938	Apr. 4-7	Oct. 21	200	4,254	27.66	15.40	
<u>Utah</u>									
Garland	41°44'N	1938	Apr. 9	Nov. 22	227	4,638	36.29	14.13	
Salt Lake City	40°46'N	1938	Apr. 13	Nov. 2-10	207	4,897	27.49	14.06	
West Jordan	40°32'N	1938	Apr. 14	Oct. 26	195	4,680	16.46	16.44	
Sevier Valley	38°35'N	1938	Apr. 20	Oct. 18	181	4,314	22.11	16.06	
Mean	-----				196	4,468	26.38	15.32	
Standard Deviation	-----				19	338	5.93	1.01	
Coefficient of Variation (%)	-----				9.7	7.6	22.5	6.6	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

^{1/} Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 46

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 11 (711)
7 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date * Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
<u>Washington</u> Toppenish	46°19'N	1938	Mar. 28	Oct. 16	202	5,358	22.40	15.60
<u>Idaho</u> Buhl	42°36'N	1938	Apr. 29	Oct. 12	166	4,027	28.27	15.80
Twin Falls	42°32'N	1938	Apr. 4-7	Oct. 21	200	4,254	27.66	15.40
<u>Utah</u> Garland	41°44'N	1938	Apr. 9	Nov. 22	227	4,638	36.29	14.13
Salt Lake City	40°46'N	1938	Apr. 13	Nov. 2-10	207	4,897	27.49	14.06
West Jordan	40°32'N	1938	Apr. 14	Oct. 26	195	4,680	16.46	16.44
Sevier Valley	38°35'N	1938	Apr. 20	Oct. 18	181	4,314	22.11	16.06
Mean	-----	-----	-----	-----	197	4,595	25.81	15.36
Standard Deviation	-----	-----	-----	-----	17	427	5.89	.90
Coefficient of Variation (%)	-----	-----	-----	-----	8.6	9.3	22.8	5.9

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 47

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 12 (618)

3 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date * Sown	Date * Harvested	SOWN-TO-HARVESTED			YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	
<u>Idaho</u>									
Twin Falls	42°32'N	1938	Apr. 4-7	Oct. 21	200	4,254	25.51	15.19	
<u>Utah</u>									
Salt Lake City	40°46'N	1938	Apr. 13	Nov. 2-10	207	4,897	24.80	13.88	
Sevier Valley	38°35'N	1938	Apr. 20	Oct. 18	181	4,314	20.66	15.97	
Mean	-----				196	4,488	23.66	15.01	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 48

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 15 (or 315)
3 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
Jerome, Idaho	42°44'N	1949	Apr. 26	Oct. 26	183	4,192	4.30	---
Layton, Utah	41°05'N	1945	Apr. 17	Oct. 8-9	175	4,201	23.05	16.48
Granger, Utah	40°42'N	1945	Apr. 6-7	Oct. 10-16	190	4,294	27.59	16.12
Mean -----					183	4,229	18.31	16.30

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 49

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 24 (824)
5 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees ($^{\circ}$ F.)	Beets: per Acre (tons)	Sucrose Content (percent)
Toppenish, Wash.	46°19'N	1939	Mar. 27	Oct. 16	203	5,031	23.15	17.61
Idaho Falls, Idaho	43°29'N	1939	Apr. 18-19	Oct. 21	186	3,617	16.28	18.18
Buhl, Idaho	42°36'N	1939	Apr. 21	Oct. 20	182	4,333	24.54	17.87
Granger, Utah	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	24.55	17.19
West Jordan, Utah	40°32'N	1939	Apr. 26-27	Oct. 23	180	4,470	15.97	18.95
Mean -----					191	4,472	20.90	17.96
Standard Deviation -----					13	500	4.79	.60
Coefficient of Variation (%) -----					6.8	11.2	22.9	3.3

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 50

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 23 (723)
5 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS		
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	
<u>Utah</u>									
Garland	41°44'N	1938	Apr. 9	Nov. 22	227	4,638	36.36	13.75	
Salt Lake City	40°46'N	1938	Apr. 13	Nov. 2-10	207	4,897	29.17	14.02	
Granger	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	27.76	16.17	
West Jordan	40°32'N	1938	Apr. 14	Oct. 26	195	4,680	18.43	16.22	
"	"	1939	Apr. 26-27	Oct. 23	180	4,470	17.09	18.31	
Sevier Valley	38°35'N	1938	Apr. 20	Oct. 18	181	4,314	23.39	15.71	
Mean					199	4,652	25.37	15.70	
Standard Deviation					17	223	7.18	1.52	
Coefficient of Variation (%)					8.5	4.8	28.3	9.7	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 51

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 23 (723)
7 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date * Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS		
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	
<u>Idaho</u>									
Buhl	42°36'N	1938	Apr. 29	Oct. 12	166	4,027	25.29	15.81	
Twin Falls	42°32'N	1938	Apr. 4-7	Oct. 21	200	4,254	27.37	14.78	
<u>Utah</u>									
Garland	41°44'N	1938	Apr. 9	Nov. 22	227	4,638	36.36	13.75	
Salt Lake City	40°46'N	1938	Apr. 13	Nov. 2-10	207	4,897	29.17	14.02	
Granger	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	27.76	16.17	
West Jordan	40°32'N	1938	Apr. 14	Oct. 26	195	4,680	18.43	16.22	
"	"	1939	Apr. 26-27	Oct. 23	180	4,470	17.09	18.11	
Sevier Valley	38°35'N	1938	Apr. 20	Oct. 18	181	4,314	23.39	15.71	
<hr/>									
Mean					195	4,524	25.61	15.60	
Standard Deviation					18	323	5.72	1.13	
Coefficient of Variation (%)					9.2	7.1	22.3	8.5	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 52

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 23 (723)
9 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date * Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS		
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sugar: Content (percent)	
Washington									
Toppenish	46°19'N	1938	Mar. 28	Oct. 16	202	5,358	23.00	15.40	
"	"	1939	Mar. 27	Oct. 16	203	5,031	25.05	17.23	
Idaho									
Idaho Falls	43°29'N	1939	Apr. 18-19	Oct. 21	186	3,617	17.98	18.67	
Buhl	42°36'N	1938	Apr. 29	Oct. 12	166	4,027	25.29	15.83	
Twin Falls	42°32'N	1938	Apr. 4-7	Oct. 21	200	4,254	27.37	14.78	
Utah									
Garland	41°44'N	1938	Apr. 9	Nov. 22	227	4,638	36.36	13.75	
Salt Lake City	40°46'N	1938	Apr. 13	Nov. 2-10	207	4,897	29.17	14.02	
Granger	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	27.76	16.17	
West Jordan	40°32'N	1938	Apr. 14	Oct. 26	195	4,680	18.43	16.22	
"	"	1939	Apr. 26-27	Oct. 23	180	4,470	17.09	18.31	
Sevier Valley	38°35'N	1938	Apr. 20	Oct. 18	181	4,314	23.39	15.71	
Mean	-----				196	4,653	24.63	16.01	
Standard Deviation	-----				16	487	5.30	1.49	
Coefficient of Variation (%)	-----				8.2	10.7	21.5	9.3	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 53
1/
 PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 41

Jerome, Idaho
 Latitude 42°44'N

Variety	Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELD	
				No. of Days	Summation of Day-Degrees	Beets per Acre	(tons)
US 41 (or 6-8)	1947	May 20	Oct. 13	146	3,744	12.42	
C.T. sel. US 41 (or 88-3)	1949	June 10	Oct. 25	137	3,352	4.9	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 54

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 41 (or 028)
2 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS		
					No. of Days	Summation of Day-Degrees (^o F.)	Beets: Per Acre	Sucrose Content (percent)	
Twin Falls, Idaho	42°32'N	1955	Apr. 22	Oct. 15	176	3,826	27.40	16.00	
" "	"	1956	Apr. 11-12	Oct. 22-24	195	4,206	32.80	17.80	
" "	"	1957	Apr. 17	Oct. 21	187	4,187	27.65	17.15	
Taylorsville, Utah	40°46'N	1955	Apr. 13	Oct. 10	180	4,514	26.50	14.40	
Mean -----					184	4,183	28.59	16.33	
Standard Deviation -----					8	224	2.64	1.42	
Coefficient of Variation (%) -----					4.3	5.4	9.2	8.7	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 55

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 41 (or 941)
3 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sugar: Content (percent)
Jerome, Idaho	42°44'N	1950	May 25	Oct. 8	136	3,308	9.30	---
Twin Falls, Idaho	42°32'N	1950	Apr. 17-18	Oct. 19	185	3,626	21.80	15.31
Taylorsville, Utah	40°46'N	1950	Mar. 22	Oct. 2	194	4,280	33.40	12.01
Mean -----					172	3,738	21.50	13.66

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 56

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 41 (78)
4 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
Toppenish, Wash.	46°19'N	1949	Apr. 8	Oct. 10-11	186	4,930	33.41	16.65
Twin Falls, Idaho	42°32'N	1948	Apr. 8	Oct. 11-12	187	3,943	24.01	15.54
" "	"	1949	Apr. 15	Oct. 18-20	187	4,060	27.70	17.33
Granger, Utah	40°42'N	1948	Apr. 12	Oct. 25-30	199	4,982	24.30	14.91
" "	"	1948	Apr. 16	Nov. 1-2	200	4,994	20.02	15.17
Riverton, Utah	40°30'N	1949	Apr. 12	Oct. 26-27	198	4,713	22.90	15.25
Mean -----					193	4,604	25.39	15.82
Standard Deviation -----					8	503	4.31	1.00
Coefficient of Variation -----					4.1	10.9	17.0	6.3

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 57

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 56/2
Jerome, Idaho
Latitude 42°44'N

Variety	Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
				No. of Days	Summation of Day-Degrees (°F.)	Bets per Acre	(tons)
U.S. 56/2 (or 759)	1949	Apr. 26	Oct. 26	183	4,192	11.6	
U.S. 56/2 (or 859)	1949	Apr. 26	Oct. 26	183	4,192	10.9	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 58

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 56
2 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

Station and Variety	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS Beets per Acre (tons)
					No. of Days	Summation of Day-Degrees (°F.)	
<u>Jerome, Idaho</u>	42°44'N						
U.S. 56		1948	May 20	Nov. 4	168	3,773	11.80
U.S. 56 (656)		1949	Apr. 26	Oct. 26	183	4,192	11.4
U.S. 56 (Sel. 858)		1949	Apr. 26	Oct. 26	183	4,192	13.6
<u>Granger, Utah</u>	40°42'N						
U.S. 56 (or 456)		1945	Apr. 6-7	Oct. 10-16	190	4,294	29.94
Mean -----					181	4,113	16.68
Standard Deviation -----					8	213	8.30
Coefficient of Variation (%) -----					4.4	5.2	49.8

Source. Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 59
1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 35/2 (824)
Nampa, Idaho
Latitude 43°37'N

Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
1953	Apr. 23	Oct. 1	161	3,802	23.56	15.42
1954	Mar. 29	Oct. 29	214	4,320	26.64	17.78
1955	Apr. 11	Nov. 4-5	207	---	26.10	17.80
1956	Apr. 15	Oct. 9	177	4,178	18.35	15.82
1957	Apr. 12	Oct. 12	183	4,208	25.95	15.38
Mean	-----	-----	188	4,127	24.12	16.44
Standard Deviation	-----	-----	22	204	3.17	1.35
Coefficient of Variation (%)	-----	-----	11.7	4.9	13.1	8.2

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 60

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 35/2 (824)

Granger, Utah
Latitude 40°42'N

Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
1950	Mar. 30	Oct. 9	193	4,398	26.70	16.60
1950	Mar. 30	Oct. 9-10	194	4,416	23.40	16.39
1951	Apr. 3	Oct. 13-15	194	4,639	26.70	14.98
1952	Apr. 24	Oct. 6-8	167	4,742	22,20	14.86
Mean	-----	-----	187	4,549	24.75	15.71
Standard Deviation	-----	-----	13	178	2.44	.99
Coefficient of Variation (%)	-----	-----	7.0	3.9	9.9	6.3

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 61

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 35/2 (824)

Lewiston, Utah
Latitude 41°58'N

Year *	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
1951	Apr. 16	Oct. 20-21	188	3,537	19.14	16.49
1953	Apr. 16	Oct. 9	177	3,495	20.01	17.11
1954	Apr. 20	Oct. 8	171	3,619	22.48	15.83
1955	May 12	Oct. 24	165	3,379	16.60	16.80
1956	Apr. 10	Oct. 11	184	3,780	23.94	18.47
1957	Apr. 16	Oct. 11	178	3,572	23.01	16.60
Mean			177	3,564	20.86	16.88
Standard Deviation			8	117	2.86	.75
Coefficient of Variation (%)			4.5	3.3	13.7	4.4

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Data for year 1952 not available.

TABLE 62

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 35/2 (824)

Twin Falls, Idaho
Latitude 42°32'N

Year *	Date Sown	Date ** Harvested	SOWN-TO-HARVESTED		YIELDS	
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
1949	Apr. 15	Oct. 18-20	187	4,060	25.10	17.35
1950	Apr. 17-18	Oct. 19	185	3,626	19.50	15.94
1951	Apr. 10	Oct. 23	196	3,773	23.90	16.60
1951	Apr. 5	Oct. 13-15	192	3,754	20.19	16.33
1953	Apr. 21	Oct. 14	177	3,886	24.28	18.07
1954	Apr. 14	Oct. 12	181	4,040	26.99	18.85
1955	Apr. 12	Oct. 12	183	3,823	30.30	16.20
1956	Apr. 7	Oct. 20	196	4,215	27.44	16.51
1957	Apr. 25	Oct. 16	174	4,081	27.95	16.30
Mean	-----	-----	186	3,918	25.07	16.90
Standard Deviation	-----	-----	8	202	3.46	.99
Coefficient of Variation (%)	-----	-----	4.3	5.2	13.8	5.9

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Data for year 1952 not available.

** Day-degree computations were made on the basis of averages of dates indicated.

TABLE 63
1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 35 (or 54)

Jerome, Idaho
Latitude 42°44'N

Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
1946	May 9	Oct. 14-16	159	3,880	18.92	17.58
1947	May 20	Oct. 13	146	3,744	9.46	---
1948	June 25	Nov. 4	129	2,897	3.60	---
Mean	-----	-----	145	3,507	10.66	---

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 64

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 35/2 (024)
4 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
Toppenish, Wash.	46°19'N	1951	Apr. 16	Oct. 9	176	4,731	25.15	16.76
Idaho Falls, Idaho	43°29'N	1951	Apr. 14	Sept. 2-5-8	144	2,771	14.30	18.25
Taylorsville, Utah	40°46'N	1954	Apr. 8	Oct. 6	181	4,765	30.60	13.50
Granger, Utah	40°42'N	1951	Apr. 3	Oct. 13-15	194	4,639	28.90	14.78
Mean -----					174	4,226	24.74	15.82
Standard Deviation -----					19	912	6.54	2.11
Coefficient of Variation (%) -----					10.9	21.6	26.4	13.3

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 65

PHENOLOGY, DAY-DEGREE ^{1/} SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 35/2 (824)
 11 UNITED STATES INTERMOUNTAIN STATIONS
 (Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
<u>Washington</u>								
Toppenish	46°19'N	1951	Apr. 16	Oct. 9	176	4,731	24.96	16.42
<u>Idaho</u>								
Nampa	43°37'N	1953	Apr. 23	Oct. 1	161	3,802	23.56	15.42
"	"	1954	Mar. 29	Oct. 29	214	4,320	26.64	17.78
"	"	1955	Apr. 11	Nov. 4-5	207	---	26.10	17.80
"	"	1956	Apr. 15	Oct. 9	177	4,178	18.35	15.82
"	"	1957	Apr. 12	Oct. 12	183	4,208	25.95	15.38
Idaho Falls	43°29'N	1951	Apr. 14	Sept. 2-5-8	144	2,771	15.07	18.25
Jerome	42°44'N	1950	May 25	Oct. 8	136	3,308	12.70	---
Minidoka	42°40'N	1953	Apr. 2	Oct. 6	187	3,820	22.74	18.11
"	"	1954	Apr. 10	Oct. 5	178	3,940	19.99	17.85
Twin Falls ^{2/}	42°32'N	1949	Apr. 15	Oct. 18-20	187	4,060	25.10	17.35
"	"	1950	Apr. 17-18	Oct. 19	185	3,626	19.50	15.94
"	"	1951	Apr. 10	Oct. 23	196	3,773	23.90	16.60
"	"	1951	Apr. 5	Oct. 13-15	192	3,754	20.19	16.33
"	"	1953	Apr. 21	Oct. 14	177	3,886	24.28	18.07
"	"	1954	Apr. 14	Oct. 12	181	4,040	26.99	18.85
"	"	1955	Apr. 12	Oct. 12	183	3,823	30.30	16.20
"	"	1956	Apr. 7	Oct. 20	196	4,215	27.44	16.51
"	"	1957	Apr. 25	Oct. 16	174	4,081	27.95	16.30
Burley	42°32'N	1955	Apr. 15	Oct. 14	182	4,095	22.80	15.90
"	"	1956	Apr. 14	Oct. 12	181	4,233	24.33	17.10
"	"	1957	Apr. 9	Oct. 14	188	4,513	25.37	16.41
<u>Utah</u>								
Lewiston ^{2/}	41°58'N	1951	Apr. 16	Oct. 20-21	188	3,537	19.14	16.49
"	"	1953	Apr. 16	Oct. 9	177	3,495	20.01	17.11
"	"	1954	Apr. 20	Oct. 8	171	3,619	22.48	15.83
"	"	1955	May 12	Oct. 24	165	3,379	16.60	16.80
"	"	1956	Apr. 10	Oct. 11	184	3,780	23.94	18.47
"	"	1957	Apr. 16	Oct. 11	178	3,572	23.01	16.60
Taylorsville	40°46'N	1950	Mar. 22	Oct. 2	194	4,280	28.60	12.77
Granger	40°42'N	1950	Mar. 30	Oct. 9	193	4,398	26.70	16.60
"	"	1950	Mar. 30	Oct. 9-10	194	4,416	23.40	16.39
"	"	1951	Apr. 3	Oct. 13-15	194	4,639	26.70	14.98
"	"	1952	Apr. 24	Oct. 6-8	167	4,742	22.20	14.86
Riverton	40°30'N	1949	Apr. 12	Oct. 26-27	198	4,713	21.80	16.32
Mean -----					182	3,992	23.20	16.59
Standard Deviation -----					14	455	3.78	1.09
Coefficient of Variation (%) -----					7.7	11.4	16.3	6.6

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

^{1/} Computed above 40°F. base.

^{2/} Data for year 1952 not available.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 66

1/

PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety US 33 (833)

Buhl, Idaho
Latitude 42°36'N

Crop Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED			YIELDS		
			No. of Days	Summation of Day-Degrees (°F.)	Beets per Acre (tons)	Sucrose Content (percent)	Net Sugar per Acre (tons)	
1939	Apr. 21	Oct. 20	182	4,333	24.81	18.39	4.342	
"	May 8	n.a.	---	---	20.59	17.60	3.413	
1940	Apr. 10	Oct. 14	187	4,493	19.26	17.13	3.072	
"	June 6	Oct. 15	131	3,521	3.93	17.29	0.635	
1941	Mar. 7	Oct. 6-7	214	3,867	12.26	17.18	1.873	
"	Apr. 4	Oct. 6-7	186	3,771	10.54	17.64	1.600	
"	May 1	Oct. 6-7	159	3,582	6.42	18.16	0.998	
Mean	-----	-----	176	3,928	13.97	17.63	2.276	
Standard Deviation	-----	-----	27	405	8.15	.46	1.431	
Coefficient of Variation (%)	-----	-----	15.3	10.3	58.3	2.6	62.9	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Net sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested. Gross sugar is the estimated total sugar content per acre (tons of beets per acre multiplied by percentage of sucrose in the beets).

n.a. - not available.

TABLE 67

1/

PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety US 33 (833)

Jerome and Buhl, Idaho

State and Station	Latitude	Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS		
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Net-2/ Sugar per Acre (tons)
Jerome, Idaho	42°44'N	1944	May 20	Oct. 24	157	3,758	9.40	---	---
" "	"	"	June 15	Oct. 24	131	3,262	2.96	---	---
Buhl, Idaho	42°36'N	1939	Apr. 21	Oct. 20	182	4,333	24.81	18.39	4.342
" "	"	"	May 8	n.a.	---	---	20.59	17.60	3.413
Buhl, Idaho	42°36'N	1940	Apr. 10	Oct. 14	187	4,493	19.26	17.13	3.072
" "	"	"	June 6	Oct. 15	131	3,521	3.93	17.29	0.635
Buhl, Idaho	42°36'N	1941	Mar. 7	Oct. 6-7	214	3,867	12.26	17.18	1.873
" "	"	"	Apr. 4	Oct. 6-7	186	3,771	10.54	17.64	1.600
" "	"	"	May 1	Oct. 6-7	159	3,582	6.42	18.16	0.998
Mean	-----	-----	-----	-----	168	3,823	12.24	17.63	2.276
Standard Deviation	-----	-----	-----	-----	30	383	7.78	.46	1.431
Coefficient of Variation	-----	-----	-----	-----	17.8	10.0	63.6	2.6	62.9

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested. Gross sugar is the estimated total sugar content per acre (tons of beets per acre multiplied by percentage of sucrose in the beets).

n.a. - not available.

TABLE 68

^{1/} PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety US 33 (833)
Granger, Utah
Latitude 40°42'N.

Crop Year *	Date Sown	Date ** Harvested	SOWN-TO-HARVESTED		YIELDS	
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Net- ^{2/} Sugar Content per Acre (tons)
1939	Apr. 4	Oct. 26	205	4,911	26.33	17.22
1940-Field 1	Apr. 13	Nov. 1	202	5,504	23.70	18.04
" Field 2	Apr. 13	Oct. 29	199	5,456	27.51	17.63
" Field 3	Apr. 13	Nov. 13	214	5,504	23.10	14.25
" Field 4	Apr. 13	Oct. 17	187	5,264	24.44	17.89
" Field 5	Apr. 13	Nov. 14	215	5,504	28.30	16.19
1941	Mar. 28	Oct. 21	207	4,572	28.36	17.18
1942	May 11-12	Oct.26-Nov.2	172	4,352	25.58	16.80
1944	n.a.	n.a.	---	---	22.48	13.87
Mean	-----	-----	200	5,133	25.52	16.56
Standard Deviation	-----	-----	13	491	2.33	1.50
Coefficient of Variation (%)	-----	-----	6.5	9.6	9.1	9.1

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

^{1/} Computed above 40°F. base.

^{2/} Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested. Gross sugar is the estimated total sugar content per acre (tons of beets per acre multiplied by percentage of sucrose in the beets).

n.a. - not available.

* Data for year 1943 not available.

** Day-degree computations were made on the basis of averages of dates indicated.

8 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year *	Date ** Sown	Date** Harvested	No. of Days	SOWN-TO-HARVESTED		YIELDS		
						Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	Net-2/ Sugar per Acre (tons)	
Toppenish, Wash.	46°19'N	1939	Mar. 27	Oct. 16	203	5,031	23.15	17.69	3.677	
Idaho Falls, Idaho	43°29'N	1939	Apr.18-19	Oct. 21	186	3,617	16.89	18.77	2.642	
Jerome, Idaho	42°44'N	1944	May 20	Oct. 24	157	3,758	9.40	---	---	
"	"	"	June 15	Oct. 24	131	3,262	2.96	---	---	
Buhl, Idaho	42°36'N	1939	Apr. 21	Oct. 20	182	4,333	24.81	18.39	4.342	
"	"	"	May 8	n.a.	---	---	20.59	17.60	3.413	
"	"	1940	Apr. 10	Oct. 14	187	4,493	19.26	17.13	3.072	
"	"	"	June 6	Oct. 15	131	3,521	3.93	17.29	0.635	
"	"	1941	Mar. 7	Oct. 6-7	214	3,867	12.26	17.18	1.893	
"	"	"	Apr. 4	Oct. 6-7	186	3,771	10.54	17.64	1.600	
"	"	"	May 1	Oct. 6-7	159	3,582	6.42	18.16	0.998	
Twin Falls, Idaho	42°32'N	1940	Apr.18-19	Oct.21-22	187	4,609	28.72	16.76	4.459	
"	"	1941	Apr. 21	Oct.13-14	176	3,824	25.22	18.53	3.891	
Taylorsville, Utah	40°46'N	1941	Apr. 1	Oct. 13	195	4,488	23.24	13.89	2.868	
Granger, Utah	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	26.23	17.22	4.056	
"	"	1940-Field 1	Apr. 13	Nov. 1	202	5,504	23.70	18.04	3.730	
"	"	" Field 2	Apr. 13	Oct. 29	199	5,456	27.51	17.63	4.273	
"	"	" Field 3	Apr. 13	Nov. 13	214	5,504	23.10	14.25	2.656	
"	"	" Field 4	Apr. 13	Oct. 17	187	5,264	24.44	17.89	3.808	
"	"	" Field 5	Apr. 13	Nov. 14	215	5,504	28.30	16.19	3.930	
"	"	1941	Mar. 28	Oct. 21	207	4,572	28.36	17.18	4.257	
"	"	1942	May 11-12	Oct.26-Nov.2	172	4,352	25.58	16.80	3.715	
"	"	1944	n.a.	n.a.	---	---	22.48	13.87	2.601	
West Jordan, Utah	40°32'N	1939	Apr.26-27	Oct. 23	180	4,470	16.30	18.92	2.793	
Mean	-----	-----	-----	-----	185	4,441	19.72	17.14	3.150	
Standard Deviation	-----	-----	-----	-----	22	743	8.31	1.27	1.112	
Coefficient of Variation	-----	-----	-----	-----	11.9	16.7	5.2	7.4	35.3	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Net sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor).
The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested. Gross sugar is the estimated total sugar content per acre (tons of beets per acre multiplied by percentage of sucrose in the beets).
n.a. - not available.

* Some years were not included in this series due to lack of either phenological records or temperature data.

** Day-degree computations were made on the basis of averages of dates indicated.

TABLE 70

1/ PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS DURING SUCCESSIVE PLANTINGS - Variety Imp. US 33(910)

Buhl, Idaho
Latitude 42°36'N.

Crop Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS		
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	<u>2/</u> Net Sugar per Acre (tons)
1940	Apr. 10	Oct. 14	187	4,493	20.73	16.57	3.156
1940	June 6	Oct. 15	131	3,521	6.60	16.37	0.991
1941	Mar. 7	Oct. 6-7	214	3,867	12.24	16.88	1.836
"	Apr. 4	Oct. 6-7	186	3,771	13.75	17.54	2.036
"	May 1	Oct. 6-7	159	3,582	9.74	17.84	1.457
Mean			175	3,847	12.61	17.04	1.895
Standard Deviation			31	334	4.64	.65	.703
Coefficient of Variation (%)			17.7	8.7	36.8	3.8	37.1

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested. Gross sugar is the estimated total sugar content per acre (tons of beets per acre multiplied by percentage of sucrose in the beets).

TABLE 71

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety Imp. US 33 (910)
3 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS		
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sugar Content (percent)	2/ Sugar Net per Acre (tons)
Idaho Buhl	42°36'N	1940	Apr. 10	Oct. 14	187	4,493	20.73	16.57	3.156
	"	"	June 6	Oct. 15	131	3,521	6.60	16.37	0.991
	"	1941	Mar. 7	Oct. 6-7	214	3,867	12.24	16.88	1.836
	"	"	Apr. 4	Oct. 6-7	186	3,771	13.75	17.54	2.036
	"	"	May 1	Oct. 6-7	159	3,582	9.74	17.84	1.457
Twin Falls	42°32'N	1941	Apr. 21	Oct. 13-14	176	3,824	25.77	17.91	3.799
Utah Granger	40°42'N	1942	May 11-12	Oct. 26 - Nov. 12	172	4,352	24.59	17.13	3.651
Mean					175	3,916	16.20	17.18	2.418
Standard Deviation					23	184	8.05	0.63	1.20
Coefficient of Variation (%)					13.1	4.7	49.7	3.7	49.6

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Net sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested. Gross sugar is the estimated total sugar content per acre (tons of beets per acre multiplied by percentage of sucrose in the beets).

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 72

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 33 (333)
3 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date* Harvested	SOWN-TO-HARVESTED		YIELDS		
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)	<u>2/</u> Sugar Net per Acre (tons)
Toppenish, Wash.	46°19'N	1945	Mar. 20	Oct. 8-12	204	4,958	32.72	16.94	5.532
Layton, Utah	41°05'N	1945	Apr. 17	Oct. 8-9	175	4,201	23.97	16.63	3.646
Granger, Utah	40°42'N	1944	n.a.	n.a.	---	---	23.78	14.56	2.926
"	"	1945	Apr. 6-7	Oct. 10-16	190	4,294	29.68	15.83	4.078
"	"	1945	" "	" "	190	4,294	27.54	16.19	3.942
Mean	-----	-----	-----	-----	190	4,437	27.54	16.03	4.025
Standard Deviation	-----	-----	-----	-----	9.0	327	3.67	0.84	.782
Coefficient of Variation (%)	-----	-----	-----	-----	4.7	7.4	13.3	5.2	19.4

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Net Sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested. Gross sugar is the estimated total sugar content per acre (tons of beets per acre multiplied by percentage of sucrose in the beets).

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 73
1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 33 (or 0173)
Granger, Utah
Latitude 40°42'N

Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
			No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
1943	April 1	Nov. 5	217	5,233	27.50	15.78

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

TABLE 74

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 33 (7307)
7 UNITED STATES INTERMOUNTAIN STATIONS, 1938
(Stations arranged according to latitude)

State and Station	Latitude	Date * Sown	Date * Harvested	SOWN-TO-HARVESTED		Beets: Per Acre (tons)	YIELDS		2/ Net Sugar Per Acre (tons)
				No. of Days	Summation of Day-Degrees (°F.)		Sucrose Content (percent)		
<u>Washington</u> Toppenish	46°19'N	Mar. 28	Oct. 16	202	5,358	19.67	16.02	2,819	
<u>Idaho</u> Buhl	42°36'N	Apr. 29	Oct. 12	166	4,027	21.05	16.38	3,450	
Twin Falls	42°32'N	Apr. 4-7	Oct. 21	200	4,254	23.94	15.52	3,336	
<u>Utah</u> Garland	41°44'N	Apr. 9	Nov. 22	227	4,638	31.92	14.54	3,913	
Salt Lake City	40°46'N	Apr. 13	Nov. 2-10	207	4,897	26.52	15.28	3,531	
West Jordan	40°32'N	Apr. 14	Oct. 26	195	4,680	15.72	16.49	2,410	
Sevier Valley	38°35'N	Apr. 20	Oct. 18	181	4,314	19.95	16.45	2,923	
Mean				197	4,596	22.68	15.81	3,197	
Standard Deviation				17	427	5.13	0.75	0.516	
Coefficient of Variation (%)				8.6	9.3	22.6	4.7	16.1	

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

2/ Net sugar - Estimated recoverable sugar yield per acre (estimated gross sugar per acre multiplied by purity factor). The purity factor (also called the purity coefficient) is the ratio between percentage sucrose in the beets harvested and the percentage total soluble substances in the beets harvested. Gross sugar is the estimated total sugar content per acre (tons of beets per acre multiplied by percentage of sucrose in the beets).

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 75
1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 34 (Reselection 712)
3 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date * Sown	Date * Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F)	Beets: per Acre (tons)	Sucrose Content (percent)
Twin Falls, Idaho	42°32'N	1938	Apr. 4-7	Oct. 21	200	4,254	28.48	15.06
Salt Lake City, Utah	40°46'N	1938	Apr. 13	Nov. 2-10	207	4,897	27.98	14.12
Sevier Valley, Utah	38°35'N	1938	Apr. 20	Oct. 18	181	4,314	21.42	16.11
Mean					196	4,488	25.96	15.10

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

* Day-degree computations were made on the basis of averages of dates indicated.

TABLE 76

1/
PHENOLOGY, DAY-DEGREE SUMMATIONS, AND YIELDS OF SUGAR BEETS - Variety US 34 (Reselection 812)
3 UNITED STATES INTERMOUNTAIN STATIONS
(Stations arranged according to latitude)

State and Station	Latitude	Year	Date Sown	Date Harvested	SOWN-TO-HARVESTED		YIELDS	
					No. of Days	Summation of Day-Degrees (°F.)	Beets: per Acre (tons)	Sucrose Content (percent)
Idaho Falls, Idaho	43°29'N	1939	Apr. 18-19	Oct. 21	186	3,617	17.11	18.52
Granger, Utah	40°42'N	1939	Apr. 4	Oct. 26	205	4,911	26.19	16.72
West Jordan, Utah	40°32'N	1939	Apr. 26-27	Oct. 23	180	4,470	16.40	18.54
Mean					190	4,333	19.90	17.93

Source: Based on data of the Sugar Beet Investigations Branch, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture.

1/ Computed above 40°F. base.

1/

TABLE 77

RANGE OF DAY-DEGREE SUMMATION REQUIREMENTS OF THE SOWN-TO-HARVESTED PERIOD OF SUGAR BEETS
GROWN IN A NUMBER OF AREAS OF THE INTERMOUNTAIN REGION OF THE UNITED STATES

Location	Latitude	SUMMATION OF DAY-DEGREES (°F.)		Source of Data (Table No.)
		Sown-to-Harvested		
Washington				
Toppenish	46°19'N	4,731 - 5,358		1 - 28
Idaho				
Sugar City	43°53'N	2,992		16
Nampa	43°37'N	3,802 - 4,320		5
Idaho Falls	43°29'N	2,771 - 3,617		7 - 28
Shelley	43°22'N	3,534 - 3,606		10 - 77
Jerome	42°44'N	2,840 - 4,192		18 - 48
Minidoka	42°40'N	3,820 - 3,940		8 - 65
Buhl	42°36'N	3,521 - 4,493		21
Twin Falls	42°32'N	3,626 - 4,992		9
Burley	42°32'N	4,095 - 4,513		8 - 65
Utah				
Lewiston	41°58'N	3,379 - 3,780		3 - 61
Garland	41°44'N	4,131 - 4,638		12 - 41
Layton	41°05'N	4,201		19
Taylorsville	40°46'N	4,280 - 5,252		12
Salt Lake City	40°46'N	4,897		41
Granger	40°42'N	4,294 - 5,504		19 - 20
Sandy	40°35'N	5,029		26
West Jordan	40°32'N	4,470 - 4,968		28 - 77
Riverton	40°30'N	4,713		15
Gunnison	39°07'N	4,178		12
Sevier Valley	38°35'N	4,314		28

1/ Computed above 50°F. base.